MASTER INDEX
Series A

Semiconductor Data Library

Device Identification and Characterization

- Registered EIA Numbers
- Motorola Non-Registered Numbers
- Devices for Military Applications
- Dimensioned Package Outlines

MOTOROLA Semiconductor Products Inc.

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Semiconductor Data Library Master Index

prepared by
Technical Information Center

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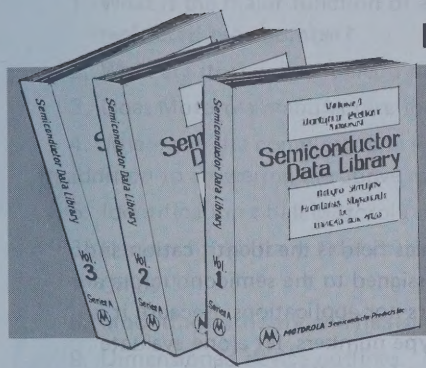
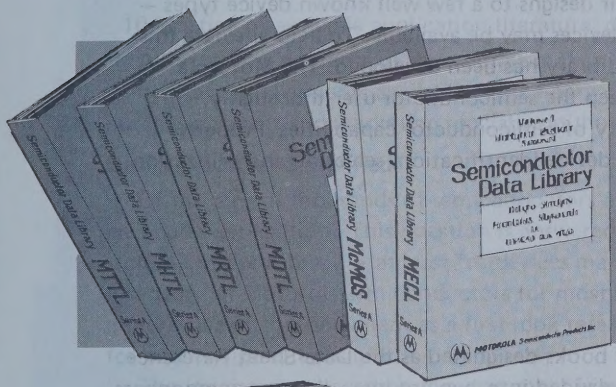
Motorola Semiconductor Data Library

Data Sheet Reference Section



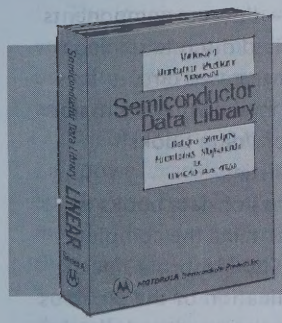
Discrete Components

A 3-volume compendium of all data sheets for Motorola-manufactured discrete semiconductors.



Digital IC's

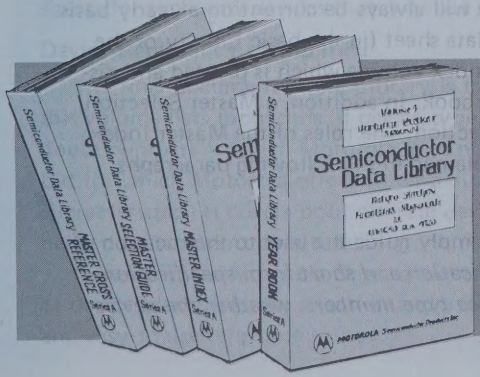
Available as bound volumes.
Available as a collection of individual data sheets until mid-1975 when bound volumes will be printed.



Linear IC's

Available as a collection of individual data sheets until mid-1975 when an up-to-date bound volume will be printed.

Update Section



MASTER CROSS REFERENCE –
Published annually.
MASTER SELECTION GUIDE –
Published 3 times a year.
MASTER INDEX –
Published annually.
YEARBOOK
Published Annually.

Motorola Semiconductor Data Library

One of the major problems facing workers in the electronics field is the identification and selection of semiconductor devices. Most type numbers assigned to the semiconductors are of little value since they indicate neither device parameters nor applications. Because it is difficult even to identify the many thousands of device type numbers, let alone evaluate their relative merits, engineers often limit their designs to a few well known device types — despite the fact that newer or more suitable devices may be available. To help alleviate this problem, the Motorola Semiconductor Data Library has been developed. The Motorola Semiconductor Data Library is designed to keep the semiconductor user thoroughly acquainted with the rapidly changing inventory of semiconductor capabilities. Properly used, it provides quick and simple answers to device identification, selection and utilization problems.

Organization of the Data Library

The heart of the Data Library is a series of books designated as the Data-Sheet Reference Section in the illustration. This book series is divided into two groups — discrete components and integrated circuits. It contains complete data sheets on every standard discrete semiconductor device in production at the time of printing, as well as for the integrated circuit lines manufactured by Motorola. Because of Motorola's strong involvement in almost every major category of semiconductors, be it discrete or integrated, this basic set of "data books" provides a good overall cross-section of the industry's solid-state capabilities.

To keep the Data-Sheet Reference Section up to date, the initial series of data books is supplemented each year with a Data-Sheet Yearbook. The yearbook contains the complete data sheets of all new products and major product revisions introduced by Motorola since the initial publication of the Data Library — Series A, or since the publication of the previous Yearbook. Hence, the Data-Sheet Reference Section will always be current on a yearly basis.

Exact location of the latest issue of a particular data sheet (in the basic Library or the subsequent Yearbooks) is referenced in the Master Index volume which is printed and distributed each year in conjunction with the new Yearbook. In addition, a Master Selection Guide is published periodically to assist in device selection. The roles of the Master Index, Selection Guide, and Master Cross-Reference are explained in the following paragraphs.

Device Identification Made Easy

The Master Index volume does much more than simply guide the user to the location of the latest device data sheet. *It provides quick identification and short-form specifications for all Motorola products and all EIA-registered device type numbers, whether the device is manufactured by Motorola, or not.*

The list of questions answered quickly and easily by the information in the Master Index is impressive.

1. What is the major function of any semiconductor device designated by an EIA-registered type number?
2. What are its significant electrical and mechanical characteristics?
3. Does Motorola manufacture the device or a suitable electrical replacement?
4. Where can the complete data sheet for Motorola-manufactured devices be located?

In addition to answering the above questions the Master Index contains:

5. Identification of all Motorola manufactured linear and digital integrated circuits.
6. Devices for Military Applications.
7. Chips
8. Mounting hardware and heatsinks.
9. Dimensioned device outlines.
10. Listing of available application literature, data books, handbooks, and product brochures.

All in all, the contents of this volume makes it one of the most useful semiconductor identification documents available for the personal reference library of every engineer, purchasing agent and marketing specialist in the electronics field.

Device Selection Simplified

Of the tens of thousands of semiconductors available, which are most suitable for a particular application? This question is answered quickly in the Master Selection Guide Volume of the Library — at least for devices manufactured by Motorola. And the broad inventory of Motorola semiconductors for most major device categories enhances the importance of this document as a first-look reference for the selection of semiconductors for new equipment designs.

The importance placed on this document is evidenced by the fact that it is the only volume in the Library that is published three times a year. Thus, it makes available to the user short-form comparison specifications of the latest Motorola semiconductors almost as quickly as they are introduced.

The selector guides in this document are arranged first by specific product categories i.e., power transistors, thyristors, rectifiers, and RF transistors, etc., then by specific application (amplifiers, switches, oscillators, etc.) and finally, by preferred devices recommended for these specific applications. Each successive Master Selection Guide highlights those new devices introduced since the previous publication so that the user is constantly aware of the latest capabilities. This also permits the user to send for the individual data sheets for such new devices that may not yet be included in the latest data sheet Yearbook.

Device Replacement Simplified

The final document in the Library is the Master Cross-Reference. Published annually, this volume lists thousands of device type numbers — both EIA-registered and competitive house numbers — which Motorola does not manufacture under the specified type numbers, but for which Motorola offers either a direct replacement or a device with similar electrical characteristics. It covers both discrete devices and integrated circuits and offers a much needed replacement directory.

In general, the Motorola Semiconductor Data Library is dedicated to simplify the task of device identification, selection and utilization and to provide a much needed, up-to-date and easy-to-use reference source.

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LSI MECL MOS PLL
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Glossary

The following glossary of Motorola device prefixes and a brief description is presented to aid the reader in locating the short-form specifications for specific device types.

Prefix	Description	Table No.
1/4M	Diode – Zener	1
.4M	Diode – Zener	1
1M	Diode – Zener	1
1.5M	Diode – Zener	1
5M	Diode – Zener	1
10M	Diode – Zener	1
50M	Diode – Zener	1
BB	Diode – Tuning (Varactor)	3
BU	Transistor – Si Power	7
MA	Transistor – Ge Milliwatt	7
MAC	Thyristor – (Triac)	6
MBD	Diode – Hot Carrier	4
MBI	Diode – Micro-I – Hot Carrier	4
MBS	Bidirectional Switch (Trigger)	6
MC	Integrated Circuit – Linear/Digital	Sect. 5
MCA	Reference Amplifier Assembly	1
MCB	Integrated Circuit – Beam Lead Flat Pack	Sect. 5
MCBC	Integrated Circuit – Beam Lead Chip	‡
MCC	Integrated Circuit – Digital/Linear Chip	‡
MCCF	Integrated Circuit – Linear Flip-Chip	‡
MCE	Integrated Circuit – Dielectrically Isolated	Sect. 5
MCL	Diode – Current Limiting	1
MCM	Integrated Circuit – Memories	Sect. 5
MCR	Thyristor (Silicon Controlled Rectifier)	6
MD	Transistor – Dual Metal Can (Multiple Device)	7
MDA	Assemblies – Rectifier	1
	Assemblies – Diode	1
MFC	Functional Circuit – Digital/Linear	Sect. 5
MFE	Transistor – Field-Effect – Metal Can	9
MH	Mounting Hardware	Sect. 8
MHQ	Transistor – Ceramic Quad Dual-In-Line	7
MHW	Transistor – RF and Microwave Hybrids	11
MJ	Transistor – Si Power	7
MJC	Unencapsulated Si Power	‡
MJE	Transistor – Si Power – Plastic	7
MK	Mounting Kit	Sect. 8
MLED	Optoelectronics – Light-Emitting Diode	5
MLM	Integrated Circuit – Linear Monolithic	Sect. 5

‡ Unencapsulated Devices (Chips) are characterized in the Motorola Semiconductor Chips Data Book.

Prefix	Description	Table No.
MM	Transistor – Small-Signal	7
	Transistor – RF Power	7
MMCD	Unencapsulated – Si Switching Diodes	‡
MMCF	Unencapsulated – Flip-Chip Small-Signal	‡
MMCFD	Unencapsulated – Flip-Chip Diode	‡
MMCM	Transistor – Micro-T Small-Signal (Ceramic)	7
MMCQ	Unencapsulated – Thin-Film Capacitors	‡
MMCRA	Unencapsulated – Thin-Film Resistors	‡
MMCS	Unencapsulated – Small-Signal Transistors	‡
MMD	Diode – Switching	1
MMF	Transistor – Field-Effect Matched Pair	9
MMT	Transistor – Micro-T Small-Signal (Plastic)	7
MOC	Optoelectronic Couplers	10
MP	Transistor – Ge Power	7
MPC	Power Hybrid Circuit – (Voltage Regulator)	12
MPF	Transistor – Field-Effect – Plastic	9
MPI	Diode – Micro-I PIN (Switching)	4
MPM	Transistor – Small-Signal Plastic	7
MPN	Diode – PIN (Switching)	4
MPQ	Transistor – Plastic Quad Dual-In-Line	7
MPS	Transistor – Plastic Small-Signal	7
MPS-A	Amplifier Series	7
MPS-H	High Frequency Series	7
MPS-K	Kits	–
MPS-L	Lamp Driver Series	7
MPS-U	Uniwatt	7
MPT	Trigger Bidirectional Switch – (Plastic)	6
MPU	Transistor – Programmable Unijunction	8
MPZ	Transient Suppressor (Power Zener Diode)	2
MQ	Transistor – Quad Flat Pack	7
MR	Rectifier	1
MRA	Rectifier – Power	1
MRD	Optoelectronic Detectors	10
MRF	Transistor – RF and Microwave	7
MS	Transistor – Heat Sink	Sect. 8
MSD	Diode – Dual – Plastic TO-92	1
MU	Transistor – Unijunction	8
MUS	Unidirectional Switch – Trigger	6
MV	Diode – Tuning (Varactor)	3
MVAM	Tuning Diode (Hyper-abrupt)	4
MVI	Diode – Micro-I Tuning (Varactor)	3
MVS	Voltage Stabilizer Diode	1
MZ	Diode – Zener	1
MZC	Unencapsulated – Diode – Zener	‡

‡ Unencapsulated Device (Chips) are characterized in the Motorola Semiconductor Chips Data Book.

How to Use the Semiconductor Data Library Master Index for Device Identification

To identify semiconductors with 1N type numbers:	Turn to Section 1, Table 1 on page 1-2 and locate the device number from the numerical listing. In some instances, the information in the table may refer to a second table for the desired electrical characteristics.
To identify semiconductors with 2N. . ., 3N. . ., and 4N. . . type numbers:	Turn to Section 3, Table 7 on page 3-2 and locate the device number from the numerical listing. In some cases, the information in this table may refer to a second table for electrical characteristics.
To identify Semiconductors with Motorola non-registered device numbers:	Turn to the Motorola Glossary listing on page viii. This listing will identify the product and refer to the table in which the electrical characteristics are detailed in alpha-numerical sequence. The non-registered listings follow the EIA registered part numbers.

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1N... JEDEC Registered Devices

and Motorola Non-Registered Devices

1

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TABLE 1 - DIODE INDEX

This index is a master numerical index for 1N. . . type numbers and short-form specifications for rectifiers, zeners, signal diodes and reference devices with registered and non-registered specifications. Specifications for Thyristor (four-layer) diodes, transient suppressors, varactors, microwave, and UHF diodes are shown in other tables. See the index on Page 1-1.

KEY

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol $V_{Z\pm\%}$	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} µs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C

Numerical Listing of Registered Type Numbers
***Available from Motorola**

S – Silicon
G – Germanium
A – Gallium Arsenide
E – Selenium

Type number of recommended replacement or of nearest electrical equivalent

First type number on data sheet where the EIA type or replacement part number is located
OR
Table where short-form specifications are given

RECTIFIERS
SHOWN IN BOLD TYPE

V_{RWM} – Peak Working Reverse Voltage

V_F – Forward Voltage Drop (Average and Peak values shown without distinction)

I_O – Average Forward Current Rating

I_R – Average Reverse Current

I_{FSM} – Peak Surge Current

SIGNAL DIODES
SHOWN IN LIGHT TYPE

PRV – Peak Reverse Voltage

V_F @ I_F – Maximum Forward Voltage at Indicated Forward Current,
A – Ampere
m – mA

I_R – Reverse Current –
m – mA
n – nA
* – µA

t_{rr} – Reverse Recovery Time

ZENER DIODES
SHOWN IN BOLD TYPE

V_Z(Nom) – Nominal Zener Breakdown Voltage

I_{ZT} – Test Current for Zener Voltage

Tol – Tolerance for Specified Nominal Zener Breakdown Voltage

P_D – Maximum Power Dissipation
m – mW
W – W

REFERENCE DIODES
SHOWN IN LIGHT TYPE

V_Z(Nom) – Nominal Zener Breakdown Voltage

T_C – Average Temperature Coefficient over Temperature Range

I_{ZT} – Test Current for Zener Voltage

Temp Range – Operating Range of Average T_C

The Codes Listed Below Identify The Type of Products.

CODE	PRODUCT	CODE	PRODUCT
3	3-layer (diac)	I	Current Regulator
4	4-layer Diode	J	Hot-Carrier (Schottky) Signal Diode
A	Assembly, Rectifier	M	Microwave/UHF Diode
B	Backward Diode	P	Power Transient Suppressor
C	Clipper, Zener	Q	Reference Amplifier
D	Light Detector	R	Reference Diode
E	Light-Emitter	S	Signal Diode, General Purpose
F	Fast Recovery Rectifier	T	Tunnel Diode
G	General-Purpose Rectifier	V	Varactor
H	Hot-Carrier (Schottky) Rectifier	Z	Zener Diode

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N23H			Table 4	M									
1N34	G			S	60	1.0	8.5m	15*					
1N34A	G			S	60	1.0	5.0m	30*					
1N35	G			S	50			2.0m					
1N38	G			S	100	1.0	7.5m	25*					
1N38A	G			S	100	1.0	4.0m	6.0*					
1N38B	G			S	100	1.0	4.0m	6.0*					
1N39	G			S	200	1.0	5.0m	40*					
1N39A	G			S	200	1.0	5.0m	40*					
1N39B	G			S	200	1.0	4.0m	650*					
1N40	G			S	25								
1N41	G			S	25								
1N42	G			S	50								
1N43	G			S	60	1.0	5.0m	20*					
1N44	G			S	115	1.0	3.0m	410*					
1N45	G			S	75	1.0	3.0m	410*					
1N46	G			S	50	1.0	3.0m	1.5m					
1N47	G			S		1.0	5.0m	400*					
1N48	G			S	85	1.0	4.0m	833*					
1N49	G			S	50	1.0	4.0m						
1N50	G			S	50	1.0	4.0m						
1N51	G			S	50	1.0	2.5m						
1N52	G			S	85	1.0	4.0m	150*					
1N52A	G			S	50	1.0	5.0m	100*					
1N53	S		Table 4	M									
1N53A	S		Table 4	M									
1N53B	S		Table 4	M									
1N53C	S		Table 4	M									
1N53D	S		Table 4	M									
1N54	G			S	35	1.0	5.0m	10*					
1N54A	G			S	50	1.0	5.0m	7.0*					
1N55	G			S	150	1.0	3.0m	0.3m					
1N55A	G			S	150	1.0	4.0m	500*					
1N55B	G			S	190	1.0	5.0m	500*					
1N56	G			S	30	1.0	15m	300*					
1N56A	G			S	40	1.0	15m	300*					
1N57	G			S	80	1.0	3.6m	300*					
1N58	G			S	100	1.0	5.0m	800*					
1N58A	G			S	100	1.0	4.0m	600*					
1N59	G			S	250	1.0	3.0m	800*					
1N60	G			S	50	1.0	5.0m	40*					
1N60A	G			S	40								
1N61	G			S	130	1.0	5.0m	300*					
1N62	G			S	110	1.0	5.0m	700*					
1N63	G			S	125	1.0	4.0m	50*					
1N63A	G			S	100	1.0	4.0m	50*					
1N64	G			S	20								
1N65	G			S	85	1.0	2.5m	200*					
1N66	G			S	60	1.0	5.0m	50*					
1N66A	G			S	60	1.0	5.0m	50*					
1N67	G			S	80	1.0	4.0m	5.0*					
1N67A	G			S	100	1.0	4.0m	5.0*					
1N68	G			S	100	1.0	3.0m	625*					
1N68A	G			S	130	1.0	3.0m	625*					
1N69	G			S	75	1.0	5.0m	50*					
1N69A	G			S	60	1.0	5.0m	30*					
1N70	G			S	125	1.0	3.0m	25*					
1N70A	G			S	100	1.0	3.0m	25*					
1N71	G			S	40	1.0	15m	0.3m					
1N73	G			S		1.7	15m	0.05m					
1N74	G			S		1.8	15m	0.05m					
1N75	G			S	125	1.0	2.5m	50*					
1N76	S		Table 4	M									
1N76A	S		Table 4	M									
1N77A				D									
1N77B				D									
1N78	S		Table 4	M									
1N78A	S		Table 4	M									
1N78B	S		Table 4	M									
1N78C	S		Table 4	M									

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N78D	S		Table 4	M									
1N78E	S		Table 4	M									
1N78F	S		Table 4	M									
1N79				M									
1N81	G			S	50	1.0	3.0m	10*					
1N81A	G			S	40	1.0	3.0m	10*					
1N82	S		Table 4	M									
1N82A	S		Table 4	M									
1N82AG	S		Table 4	M									
1N82G	S		Table 4	M									
1N83	G			S	225	1.0	5.0m	30*					
1N84	G			S	12	1.0	60m	0.1m					
1N85				D									
1N86	G			S	70	1.0	4.0m	50*					
1N87	S			S	23	0.25	0.1m	30*					
1N87A	S			S	23	0.25	0.1m	10*					
1N88	G			S	85	1.0	2.5m	0.1m					
1N89	G			S	100	1.0	3.5m	8.0*					
1N90	G			S	75	1.0	5.0m	800*					
1N91	G			G	**100**	**0.5**	**0.15**	**4.0**	**25**				
1N92	G			G	**200**	**0.5**	**0.1**	**2.0**	**25**				
1N93	G			G	**300**	**0.5**	**0.075**	**1.3**	**25**				
1N94	G			G	**380**	**0.7**	**0.5**	**0.8**	**25**				
1N95	G			S	75	1.0	10m	800*					
1N96	G			S	75	1.0	20m	800*					
1N96A	G			S	60	1.0	40m	500*					
1N97	G			S	100	1.0	10m	100*					
1N98	G			S	100	1.0	20m	100*					
1N98A	G			S	250	1.0	40m	100*					
1N99	G			S	100	1.0	10m	50*					
1N100	G			S	100	1.0	20m	50*					
1N100A	G			S	80	1.0	40m	0.05m					
1N101	G			S	150	1.0	10m	10*					
1N102	G			S	75	1.0	15m	3.0*					
1N103	G			S	12	1.0	30m	0.1m					
1N104	G			S	12	1.0	30m	0.1m					
1N105	S		Table 4	M									
1N106	G			S	300	1.0	20m	70*					
1N107	G			S	10	1.0	150m	200*					
1N108	G			S	50	1.0	50m	200*					
1N109	G			S	15	1.0	1.0m	0.1m					
1N110	G		Table 4	M									
1N111	G			S	70	1.0	5.0m	25*					
1N112	G			S	70	1.0	5.0m	50*					
1N113	G			S	70	1.0	2.5m	25*					
1N114	G			S	70	1.0	2.5m	50*					
1N115	G			S	70	1.0	2.5m	100*					
1N116	G			S	75	1.0	5.0m	100*					
1N117	G			S	75	1.0	10m	100*					
1N118	G			S	75	1.0	20m	100*					
1N118A	G			S	60	1.0	40m	0.1m					
1N119	G			S	60	1.0	5.0m		0.5				
1N120	G			S	60	1.0	5.0m		0.5				
1N124	G		Table 4	M									
1N124A	G		Table 4	M									
1N126	G			S	75	1.0	5.0m	50*					
1N126A	G			S	75	1.0	25m	50*					
1N127	G			S	125	1.0	3.0m	25*					
1N127A	G			S	125	1.0	25m	25*					
1N128	G			S	50	1.0	3.0m	10*					
1N128A	G			S	40	1.0	3.0m	10*					
1N132	G			S	25								
1N133	G			S	5.0	0.5	3.0m	300*					
1N134			Table 4	M									
1N137A	S			S	36	1.0	3.0m	0.03*					
1N137B	S			S	36	1.0	20m	0.03*					
1N138A	S			S	18	1.0	5.0m	0.01*					
1N138B	S			S	18	1.0	40m	0.01*					
1N139	G			S	40	1.0	20m	1.5m					
1N140	G			S	70	1.0	40m	300*					

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N141	G			S	70	1.0	20m	50*					
1N142	G			S	100	1.0	5.0m	100*					
1N143	G			S	100	1.0	40m	100*					
1N144	G			S	30	1.0	100m	200*					
1N145	G			S	30	1.0	40m	100*					
1N147	G		Table 4	M									
1N147A	G		Table 4	M									
1N149	S		Table 4	M									
1N150	S		Table 4	M									
1N151	G			G	100	0.7	0.5	2.4	25				
1N152	G			G	200	0.7	0.5	1.9	25				
1N153	G			G	300	0.7	0.5	1.2	25				
1N155	S		Table 4	M									
1N155A	S		Table 4	M									
1N156	S		Table 4	M									
1N158	G			G	380	1.4	0.5	0.8	25				
1N160	S		Table 4	M									
1N173A	S		Table 4	M									
1N188				D									
1N189				D									
1N190	G			S	3.0	0.75	10m	0.8m					
1N191	G			S	90	1.0	5.0m		0.5				
1N192	G			S	70	1.0	5.0m		0.5				
1N193	S			S	40	2.0	1.0m	40*	0.5				
1N194	S			S	40	2.0	1.5m	10*	0.2				
1N194A	S			S	40	1.0	1.0m	10*	0.2				
1N195	S			S	40	2.0	2.0m	10*	0.3				
1N196	S			S	40	2.0	1.0m	10*	0.1				
1N198	G			S	80	1.0	4.0m	10*					
1N198A	G			S	80	1.0	4.0m	10*					
1N198B	G			S	80	1.0	4.0m	10*	0.3				
1N200	S			S	6.8	1.0	50m						
1N201	S			S	8.2	1.0	35m						
1N202	S			S	10	1.0	30m						
1N203	S			S	12	1.0	23m						
1N204	S			S	15	1.0	17m						
1N205	S			S	18	1.0	12m	0.1*					
1N206	S			S	22	1.0	9.0m	0.1*					
1N207	S			S	27	1.0	7.0m	0.1*					
1N208	S			S	33	1.0	5.5m	0.1*					
1N209	S			S	39	1.0	4.5m	0.1*					
1N210	S			S	47	1.0	3.5m	0.1*					
1N211	S			S	56	1.0	2.7m	1.0*					
1N212	S			S	68	1.0	2.0m	1.0*					
1N213	S			S	82	1.0	1.5m	1.0*					
1N214	S			S	100	1.0	1.2m	1.0*					
1N215	S			S	120	1.0	0.9m	1.0*					
1N216	S			S	150	1.0	0.7m	5.0*					
1N217	S			S	180	4.0	6.5m	5.0*					
1N218	S			S	220	4.0	6.0m	5.0*					
1N219	S			S	270	4.0	3.0m	5.0*					
1N220	S			S	330	4.0	2.2m	5.0*					
1N221	S			S	390	4.0	2.0m	5.0*					
1N222	S			S	470	4.0	1.5m	5.0*					
1N225	S			C						10	0.2		150m
1N225A	S			C						9.1	0.2	5.0	150m
1N226	S			C						12	0.2		150m
1N226A	S			C						10	0.2	5.0	150m
1N227	S			C						14.5	0.2		150m
1N227A	S			C							0.2	5.0	150m
1N228	S			C						18	0.2		150m
1N228A	S			C							0.2	5.0	150m
1N229	S			C						21	0.2		150m
1N229A	S			C							0.2	5.0	150m
1N230	S			C						27	0.2		150m
1N231	S			C						32	0.2		150m
1N232	S			C						39	0.2		150m
1N233	S			C						45	0.2		150m
1N234	S			C						54	0.2		150m
1N235	S			C						64	0.2		150m

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N236	S			C						80	0.2		150m
1N237	S			C						100	0.2		150m
1N238	S			C						120	0.2		150m
1N239	S			C						145	0.2		150m
1N248	S			G	50	1.5	10	5.0	200				
1N248A	S	1N248B	1N248B	G	50	1.5	20	5.0	250				
★1N248B	S		1N248B	G	50	1.5	20	5.0	250				
★1N248C	S		1N248B	G	39	1.2	20	3.8	350				
1N249	S		1N248B	G	100	1.5	10	5.0	200				
★1N249A	S	1N249B	1N248B	G	100	1.5	20	5.0	250				
★1N249B	S		1N248B	G	100	1.5	20	5.0	250				
★1N249C	S		1N248B	G	77	1.2	20	3.6	350				
1N250	S			G	200	1.5	10	5.0	200				
1N250A	S	1N250B	1N248B	G	200	1.5	20	5.0	250				
★1N250B	S		1N248B	G	200	1.5	20	5.0	250				
★1N250C	S		1N248B	G	154	1.2	20	3.4	350				
1N251	S			S	30	1.0	5.0m	0.1*	0.15				
1N252	S			S	20	1.0	10m	0.1*	0.15				
1N253	S	MR1121	MR1120	G	95	1.5	1.0	0.1	4.0				
1N254	S	MR1122	MR1120	G	190	1.5	0.4		1.5				
1N255	S	MR1124	MR1120	G	380	1.5	0.4		1.5				
1N256	S	MR1126	MR1120	G	570	1.5	0.2		1.0				
1N259	S		Table 4	M									
1N263	G		Table 4	M									
1N264	S		Table 4	M									
1N265	G			S	90	1.0	3.2m	100*					
1N266	G			S	60	1.0	4.0m	75*					
1N267	G			S	25	1.0	3.5m	12*					
1N268	G			S	30	1.0	2.5m	20*					
1N269	G		Table 4	M									
1N270	G			S	80	1.0	200m	100*					
1N273	G			S	30	1.0	100m	20*					
1N276	G			S	50	1.0	40m	100*	0.3				
1N277	G			S	100	1.0	100m	75*					
1N278	G			S	50	1.0	20m	125*					
1N279	G			S	30	1.0	100m	200*					
1N281	G			S	60	1.0	100m	30*					
1N282	G			S		1.0	40m	20m					
1N283	G			S	20	1.0	200m	20*					
1N285			Table 4	M									
1N286	S		Table 4	M									
1N286A	S		Table 4	M									
1N287	G			S	60	1.0	20m	1.5m					
1N288	G			S	85	1.0	40m	350*					
1N289	G			S	85	1.0	20m	50*					
1N290	G			S	120	1.0	5.0m	100*					
1N291	G			S	120	1.0	40m	100*					
1N292	G			S	75	1.0	100m	200*					
1N294	G			S	60	1.0	5.0m	10*					
1N294A	G			S	60	1.0	5.0m	10*					
1N295	G			S	40			200*					
1N295A	G			S	40			200*					
1N296	G			S	40			200m					
1N297	G			S	80	1.0	3.5m	10*					
1N297A	G			S	80	1.0	3.5m	10*					
1N298	G			S	70	2.0	30m						
1N298A	G			S	30	2.0	30m	250*					
1N299	G			S		0.5	3.0m	200m					
1N300	S			S	15	1.0	15m	0.001*					
1N300A	S			S	15	1.0	30m	0.001*					
1N300B	S			S	15	1.0	50m	0.001*					
1N301	S			S	70	1.0	5.0m	0.05*					
1N301A	S			S	70	1.0	18m	0.05*					
1N301B	S			S	70	1.0	50m	0.01*					
1N302	S			S	225	1.0	1.0m	0.2*					
1N302A	S			S	225	1.0	5.0m	0.2*					
1N303	S			S	125	1.0	3.0m	0.1*					
1N303A	S			S	125	1.0	12m	0.1*					
1N303B	S			S	125	1.0	50m	0.1*					
1N304	S			S	55	1.5	2.0m	2.0*					

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N305	G			S	60	0.8	100m	20*					
1N306	G			S	15	0.8	100m	2.0*					
1N307	G			S	125	1.0	100m	5.0*					
1N308	G			S	8.0	1.0	300m	500*					
1N309	G			S	40	1.0	100m	100*					
1N310	G			S	125	1.0	40m	20*					
1N311	S		Table 4	M									
1N312	G			S	60	1.0	70m	50*					
1N313	G			S	125	1.0	40m	10*					
1N314	G			S				0.05m					
1N315	G			G	300	0.48	0.075	0.3	25				
1N315A	G			G	200	0.48	0.1	0.16	25				
1N316	S	1N4001	1N4001	G	50	2.0	0.2		2.0				
1N317	S	1N4002	1N4001	G	100	2.0	0.2		2.0				
1N318	S	1N4003	1N4001	G	200	2.0	0.2		2.0				
1N319	S	1N4004	1N4001	G	350	2.0	0.2		2.0				
1N320	S	1N4005	1N4001	G	500	2.0	0.2		2.0				
1N321	S	1N4007	1N4001	G	850	1.2	0.25	1.0	10				
1N322	S	1N4007	1N4001	G	850	1.2	0.25	1.0	10				
1N323	S	1N4001	1N4001	G	50	2.0	0.4		2.0				
1N324	S	1N4002	1N4001	G	100	2.0	0.4		2.0				
1N325	S	1N4003	1N4001	G	200	2.0	0.4		2.0				
1N326	S	1N4004	1N4001	G	350	2.0	0.4		2.0				
1N327	S	1N4005	1N4001	G	500	2.0	0.4		2.0				
1N328	S	1N4007	1N4001	G	850	1.2	0.4	0.06	10				
1N329	S	1N4007	1N4001	G	1000	1.2	0.4	0.06	10				
1N330	S			S	32	1.0	3.0m	0.03*					
1N331	S			S	16	1.0	5.0m	0.01*					
1N332	S	MR1124	MR1120	G	400	2.0	0.4	0.2	10				
1N333	S	MR1124	MR1120	G	400	2.0	0.2	0.2	5.0				
1N334	S	MR1123	MR1120	G	300	2.0	0.4	0.2	10				
1N335	S	MR1123	MR1120	G	300	2.0	0.2	0.2	5.0				
1N336	S	MR1122	MR1120	G	200	2.0	0.4	0.1	10				
1N337	S	MR1122	MR1120	G	200	2.0	0.2	0.1	5.0				
1N338	S	MR1121	MR1120	G	100	2.0	1.0	0.2	20				
1N339	S	MR1121	MR1120	G	100	2.0	0.4	0.1	10				
1N340	S	MR1121	MR1120	G	100	2.0	0.2	0.1	5.0				
1N341	S	MR1124	MR1120	G	400	2.0	0.4	0.5	10				
1N342	S	MR1124	MR1120	G	400	2.0	0.2	0.5	5.0				
1N343	S	MR1123	MR1120	G	300	2.0	0.4	0.5	10				
1N344	S	MR1123	MR1120	G	300	2.0	0.2	0.5	5.0				
1N345	S	MR1122	MR1120	G	200	2.0	0.4	0.5	10				
1N346	S	MR1122	MR1120	G	200	2.0	0.2	0.5	5.0				
1N347	S	MR1121	MR1120	G	100	2.0	1.0	0.5	20				
1N348	S	MR1121	MR1120	G	100	2.0	0.4	0.5	10				
1N349	S	MR1121	MR1120	G	100	2.0	0.2	0.5	5.0				
1N350	S			S	70	1.0	20m	0.03*					
1N351	S			S	120	1.0	20m	0.03*					
1N352	S			S	170	1.0	20m	0.05*					
1N353	S			S	225	1.0	20m	0.1*					
1N354	S			S	325	1.0	20m	0.1*					
1N355	G			S	100	1.0	4.0m	50*					
1N358	S			S									
1N358A	S			S									
1N359	S	1N4001	1N4001	G	50	2.0	0.1		2.0				
1N360	S	1N4002	1N4001	G	100	2.0	0.1		2.0				
1N361	S	1N4003	1N4001	G	200	2.0	0.1		2.0				
1N362	S	1N4004	1N4001	G	350	2.0	0.1		2.0				
1N363	S	1N4005	1N4001	G	500	2.0	0.1		2.0				
1N364	S	1N4007	1N4001	G	850	1.2	0.1	0.06	10				
1N365	S	1N4007	1N4001	G	1000	1.2	0.1	0.06	10				
1N367	G			S	15								
1N368	G			G	200	0.5	0.1	0.3	25				
1N368A	G			G	200	0.5	0.1	0.16	25				
1N369	S		Table 4	M									
1N369A	S		Table 4	M									
1N370	S	1N5221B	1N5221	Z						1.8	20	+20	200m
1N371	S	1N5221A	1N5221	Z						2.4	20	+20	200m
1N372	S	1N5225A	1N5221	Z						2.9	15	+20	200m
1N373	S	1N5227A	1N5221	Z						3.5	10	+20	200m

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N374	S	1N5229A	1N5221	Z						4.1	10	10	200m
1N375	S	1N5230A	1N5221	Z						4.8	10	5.0	200m
1N376	S	1N5233A	1N5221	Z						5.8	10	5.0	200m
1N377	S	1N5236A	1N5221	Z						7.1	13	5.0	200m
1N378	S	1N5238A	1N5221	Z						8.75	14	0.2	200m
1N379	S	1N5240A	1N5221	Z						10.5	15	0.2	200m
1N380	S	1N5243A	1N5221	Z						12.8	14	0.2	200m
1N381	S	1N5246A	1N5221	Z						15.8	15	0.2	200m
1N382	S	1N5249A	1N5221	Z						19	10	0.2	200m
1N383	S	1N5252A	1N5221	Z						23.5	15	0.2	200m
1N384	S	1N5255A	1N5221	Z						28.5	12	0.2	200m
1N385	S	1N5258A	1N5221	Z						34.5	13	0.2	200m
1N386	S	1N5260A	1N5221	Z						41	10	0.2	200m
1N387	S	1N5261A	1N5221	Z						48.5	11	0.2	200m
1N388	S	1N5264A	1N5221	Z						58	10	0.2	200m
1N389	S	1N5266A	1N5221	Z						71	14	0.2	200m
1N390	S	1N5269A	1N5221	Z						87.5	15	0.2	200m
1N391	S	1N5271A	1N5221	Z						105	15	0.2	200m
1N392	S	1N5274A	1N5221	Z						127.5	14	0.2	200m
1N393	S	1N5277A	1N5221	Z						157.5	14	0.2	200m
1N394	S	1N5280A	1N5221	Z						190	10	0.2	200m
1N395	S			Z						235	15	0.1	200m
1N396	S			Z						285	12	0.1	200m
1N397	S			Z						345	13	0.1	200m
1N398	S			Z						410	10	0.1	200m
1N399	S			Z						485	11	0.1	200m
1N400	S			Z						580	10	0.1	200m
1N401	S			S	1.5								
1N402	S			S	2.0								
1N403	S			S	2.5								
1N404	S			S	3.1								
1N405	S			S	3.7	1.0	225m						
1N406	S			S	4.3	1.0	200m						
1N407	S			S	5.2	1.0	170m						
1N408	S			S	6.2	1.0	130m						
1N411B	S	MR1810SB	MR1210	G	**50**	**1.5**	**50**	**25**	**525**				
1N412B	S	MR1811SB	MR1210	G	**100**	**1.5**	**50**	**25**	**525**				
1N413B	S	MR1813SB	MR1210	G	**200**	**1.5**	**50**	**25**	**525**				
1N415B	S		Table 4	M									
1N415C	S		Table 4	M									
1N415D	S		Table 4	M									
1N415E	S		Table 4	M									
1N415F	S		Table 4	M									
1N415G	S		Table 4	M									
1N415H	S		Table 4	M									
1N416B	S		Table 4	M									
1N416C	S		Table 4	M									
1N416D	S		Table 4	M									
1N416E	S		Table 4	M									
1N416F	S		Table 4	M									
1N416G	S		Table 4	M									
1N417	G			S	60				0.3				
1N418	G			S	60	1.0	7.0m		0.3				
1N419	G			S	80	1.0	125m		0.3				
★1N429	S		1N429	R						6.2		7.5	
1N430	S	1N3156	1N3154	R						8.4	0.002	10	-55/100
1N430A	S	1N3157	1N3154	R						8.4	0.001	10	-55/100
1N430B	S	1N3157A	1N3154	R						8.4	0.001	10	-55/150
1N431	S			S	68	0.55	15m						
1N432	S			S	40	1.0	10m	5.0n					
1N432A	S			S	40	1.0	20m	5.0n					
1N433	S			S	145	1.0	3.0m	0.1*					
1N433A	S			S	145	1.0	10m	0.1*					
1N434	S			S	180	1.0	2.0m	0.1*					
1N434A	S			S	180	1.0	7.0m	0.1*					
1N435	G			S	40			0.3m					
1N440	S	1N4002	1N4001	G	**100**	**1.5**	**0.3**	**0.3**					
1N440B	S	1N4002	1N4001	G	**100**	**1.5**		**0.3**	15				
1N441	S	1N4003	1N4001	G	**200**	**1.5**	**0.3**	**0.75**					
1N441B	S	1N4003	1N4001	G	**200**	**1.5**			15				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N442	S	1N4004	1N4001	G	300	1.5	0.3	1.0					
1N442B	S	1N4004	1N4001	G	300	1.5		0.001	15				
1N443	S	1N4004	1N4001	G	400	1.5	0.3	1.5					
1N443B	S	1N4004	1N4001	G	400	1.5			15				
1N444	S	1N4005	1N4001	G	500	1.5	0.3	1.75					
1N444B	S	1N4005	1N4001	G	500	1.5			15				
1N445	S	1N4005	1N4001	G	600	1.5	0.3	2.0					
1N445B	S	1N4005	1N4001	G	600	1.5		0.002	15				
1N446	S			M									
1N447	G			S	30	1.0	25m	20*					
1N448	G			S	100	1.0	25m	30*					
1N449	G			S	30	1.0	50m	10*					
1N450	G			S	100	1.0	50m	30*					
1N451	G			S	150	1.0	50m	150*					
1N452	G			S	30	1.0	100m	30*					
1N453	G			S	100	1.0	100m	30*					
1N454	G			S	50	1.0	200m	50*					
1N455	G			S	30	1.0	300m	30*					
1N456	S			S	25	1.0	40m	25n					
1N456A	S			S	25	1.0	100m	25n					
1N457	S			S	60	1.0	20m	25n					
1N457A	S			S	60	1.0	100m	25n					
1N458	S			S	125	1.0	2.0m	25n					
1N458A	S			S	125	1.0	100m	25n					
1N459	S			S	175	1.0	3.0m	25n					
1N459A	S			S	175	1.0	100m	25n					
1N460	S			S	90	1.0	5.0m	0.1*					
1N460A	S			S	90	1.0	15m	0.1*					
1N461	S			S	25	1.0	15m	0.5*					
1N461A	S			S	25	1.0	100m	0.5*					
1N462	S			S	60	1.0	5.0m	0.5*					
1N462A	S			S	60	1.0	100m	0.5*					
1N463	S			S	175	1.0	1.0m	0.5*					
1N463A	S			S	175	1.0	100m	0.5*					
1N464	S			S	125	1.0	3.0m	0.5*					
1N464A	S			S	125	1.0	100m	0.5*					
1N465	S	1N5223A	1N5221	Z						3.2	5.0		200m
1N465A	S	1N5223B	1N5221	Z						2.7	5.0	5.0	200m
1N465B	S			Z						2.7	5.0	1.0	200m
1N466	S	1N5226A	1N5221	Z						3.9	5.0		200m
1N466A	S	1N5226B	1N5221	Z						3.3	5.0	5.0	200m
1N466B	S			Z						3.3	5.0	1.0	200m
1N467	S	1N5228B	1N5221	Z						4.5	5.0		200m
1N467A	S	1N5228B	1N5221	Z						3.9	5.0	5.0	200m
1N467B	S			Z						3.9	5.0	1.0	200m
1N468	S	1N5230A	1N5221	Z						5.4	5.0		200m
1N468A	S	1N5230B	1N5221	Z						4.7	5.0	5.0	200m
1N468B	S			Z						4.7	5.0	1.0	200m
1N469	S	1N5232B	1N5221	Z						6.4	5.0		200m
1N469A	S	1N5232B	1N5221	Z						5.6	5.0	5.0	200m
1N469B	S			Z						5.6	6.0	1.0	200m
1N470	S	1N5235B	1N5221	Z						8.0	5.0		200m
1N470A	S	1N5235B	1N5221	Z						6.8	5.0	5.0	200m
1N470B	S			C						6.8	5.0	1.0	200m
1N471	S			C						3.9	5.0		200m
1N471A	S			C						3.3	5.0	5.0	200m
1N472	S			C						4.5	5.0		200m
1N472A	S			C						3.9	5.0	5.0	200m
1N473	S			C						5.4	5.0		200m
1N473A	S			C						4.7	5.0	5.0	200m
1N474	S			C						6.4	5.0		200m
1N474A	S			C						5.6	5.0	5.0	200m
1N475	S			C						8.0	5.0		150m
1N475A	S			C						6.8	5.0	5.0	200m
1N476	G			S	90	1.0	2.5m	11*					
1N477	G			S	90	1.0	2.5m	11*					
1N478	G			S	90	1.0	5.0m	7.0*					
1N479	G			S	90	1.0	5.0m	7.0*					
1N480	G			S	60	1.0	5.0m		0.5				
1N481	G			G	200	0.5	0.1	1.9	25				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N482	S			S	36	1.1	100m	0.25*					
1N482A	S			S	36	1.0	100m	25n					
1N482B	S			S	36	1.0	100m	25n					
1N483	S			S	70	1.0	100m	25n					
1N483A	S			S	70	1.0	100m	25n					
1N483B	S			S	70	1.0	100m	25n					
1N484	S			S	130	1.1	100m	0.25*					
1N484A	S			S	130	1.0	100m	25n					
1N484B	S			S	130	1.0	100m	25n					
1N485	S			S	180	1.1	100m	0.25*					
1N485A	S			S	180	1.0	100m	25n					
1N485B	S			S	180	1.0	100m	25n					
1N486	S			S	225	1.1	100m	0.25*					
1N486A	S			S	225	1.0	100m	0.05*					
1N486B	S			S	225	1.0	100m	0.05*					
1N487	S			S	300	1.1	100m	0.25*					
1N487A	S			S	300	1.0	100m	0.1*					
1N487B	S			S	300	1.0	100m	0.1*					
1N488	S			S	380	1.1	100m	0.25*					
1N488A	S			S	380	1.0	100m	0.1*					
1N488B	S			S	380	1.0	100m	0.1*					
1N490	G			S	90	1.0	5.0m		0.5				
1N497	G			S	30	1.0	100m	20*					
1N498	G			S	60	1.0	100m	25*					
1N499	G			S	75	1.0	100m	30*					
1N500	G			S	80	1.0	100m	40*					
1N501	G			S	100	1.0	100m	40*					
1N502	G			S	120	1.0	100m	50*					
1N503	S	1N4001	1N4001	G	50	1.2	0.33	0.5					
1N504	S	1N4002	1N4001	G	100	1.2	0.33	0.5					
1N505	S	1N4003	1N4001	G	200	1.2	0.33	0.5					
1N506	S	1N4004	1N4001	G	300	1.2	0.33	0.5					
1N507	S	1N4004	1N4001	G	400	1.2	0.33	0.25					
1N508	S	1N4005	1N4001	G	600	1.2	0.33	0.25					
1N509	S	1N4006	1N4001	G	800	1.2	0.33	0.25					
1N510	S	1N4007	1N4001	G	1000	1.2	0.33	0.25					
1N511	S	1N4001	1N4001	G	50	1.2	1.0	0.5					
1N512	S	1N4002	1N4001	G	100	1.2	1.0	0.5					
1N513	S	1N4003	1N4001	G	200	1.2	1.0	0.5					
1N514	S	1N4004	1N4001	G	300	1.2	1.0	0.5					
1N515	S	1N4004	1N4001	G	400	1.2	1.0	0.25					
1N516	S	1N4005	1N4001	G	600	1.2	1.0	0.25					
1N517	S	1N4006	1N4001	G	800	1.2	1.0	0.25					
1N518	S	1N4007	1N4001	G	1000	1.2	1.0	0.25					
1N519	S	1N4001	1N4001	G	50	1.2	1.25	0.5					
1N520	S	1N4002	1N4001	G	100	1.2	1.25	0.5					
1N521	S	1N4003	1N4001	G	200	1.2	1.25	0.5					
1N522	S	1N4004	1N4001	G	300	1.2	1.25	0.5					
1N523	S	1N4004	1N4001	G	400	1.2	1.25	0.25					
1N524	S	1N4005	1N4001	G	600	1.2	1.25	0.25					
1N525	S	1N4006	1N4001	G	800	1.2	1.25	0.25					
1N526	S	1N4007	1N4001	G	1000	1.2	1.25	0.25					
1N527	G			S	10	0.3	1.0m	50*					
1N530	S	1N4002	1N4001	G	100	2.0	0.3	0.003	3.0				
1N531	S	1N4003	1N4001	G	200	2.0	0.3		3.0				
1N532	S	1N4004	1N4001	G	300	2.0	0.3	0.01	3.0				
1N533	S	1N4004	1N4001	G	400	2.0	0.3	0.015	3.0				
1N534	S	1N4005	1N4001	G	500	2.0	0.3		3.0				
1N535	S	1N4005	1N4001	G	600	2.0	0.3	0.02	3.0				
1N536	S	1N4001	1N4001	G	50	0.5	0.25	0.4	15				
1N537	S	1N4002	1N4001	G	100	0.4	0.25	0.5	15				
1N538	S	1N4003	1N4001	G	200	0.3	0.25	0.5	15				
1N539	S	1N4004	1N4001	G	300	0.5	0.25	0.3	15				
1N540	S	1N4004	1N4001	G	400	0.5	0.25	0.3	15				
1N541	G			S	45	2.2	10m	18*					
1N542	G			S									
1N543	S	MR991A	MR990A	G	1200	10	0.01	0.1					
1N543A	S			G	1200	8.0	0.035	0.1					
1N544	S			G	1000	10	0.015	0.1					
1N544A	S			G	1000	10	0.075	0.1					

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N547	S	1N4005	1N4001	G	600	1.1	0.25	0.35	15				
1N548	S	1N4007	1N4001	G	900	1.1	0.3	0.35	15				
1N549	S	MR1-1200	MR1-1200	G	1200	1.1	0.3	0.35	15				
1N550	S	MR1121	MR1120	G	100	1.5	0.5		4.0				
1N551	S	MR1122	MR1120	G	200	1.5	0.5	0.001	4.0				
1N552	S	MR1123	MR1120	G	300	1.5	0.5		4.0				
1N553	S	MR1124	MR1120	G	400	1.5	0.5		4.0				
1N554	S	MR1125	MR1120	G	500	1.5	0.5		4.0				
1N555	S	MR1126	MR1120	G	600	1.5	0.5	0.005	4.0				
1N560	S	1N4006	1N4001	G	800	1.75	0.25	0.015	2.0				
1N561	S	1N4007	1N4001	G	1000	1.75	0.25	0.02	2.0				
1N562	S	MR1128	MR1120	G	800	1.75	0.4	0.015	3.0				
1N563	S	MR1130	MR1120	G	1000	1.75	0.4	0.02	3.0				
1N566	G			S	220	1.0	20m	0.2m					
1N567	G			S	100	1.0	150m	0.15m	0.3				
1N568	G			S	7.0	0.32	5.0m	0.1m	0.08				
1N569	G			S	12	0.5	250m	0.05m					
1N570	S			G	1250	10	37.5	0.1					
1N571	G			S		1.0	200m	100*	4.0				
1N573	G			G	380	0.15	0.25						
1N574	G			G	380	0.15	0.3						
1N575	G			G	380	0.3	0.35						
1N575A	G			G	380	0.15	0.35						
1N576A	G			G	380	0.15	0.4						
1N581	G			G	380	0.15	0.25						
1N582	G			G	380	0.15	0.3						
1N583	G			G	380	0.15	0.35						
1N584	G			G	380	0.15	0.4						
1N588	S	MR991A	MR990A	G	1500	1.75	0.1	0.1	5.0				
1N589	S	MR991A	MR990A	G	1500	1.75	0.25	0.1	10				
1N590	S			G	1500	8.0	0.075	0.1					
1N591	S			G	1500	8.0	0.075	0.1					
1N596	S	1N4005	1N4001	G	600	3.0	0.125	0.025	1.0				
1N597	S	1N4006	1N4001	G	800	3.0	0.125	0.025	1.0				
1N598	S	1N4007	1N4001	G	1000	3.0	0.125	0.025	1.0				
1N599	S	1N4001	1N4001	G	50	1.5	0.3	0.025	2.0				
1N599A	S	1N4001	1N4001	G	50	1.5	0.3	0.001	2.0				
1N600	S	1N4002	1N4001	G	100	1.5	0.3	0.025	2.0				
1N600A	S	1N4002	1N4001	G	100	1.5	0.3	0.001	2.0				
1N601	S	1N4003	1N4001	G	150	1.5	0.3	0.025	2.0				
1N601A	S	1N4003	1N4001	G	150	1.5	0.3	0.001	2.0				
1N602	S	1N4003	1N4001	G	200	1.5	0.3	0.025	2.0				
1N602A	S	1N4003	1N4001	G	200	1.5	0.3	0.001	2.0				
1N603	S	1N4004	1N4001	G	300	1.5	0.3	0.025	2.0				
1N603A	S	1N4004	1N4001	G	300	1.5	0.3	0.001	2.0				
1N604	S	1N4004	1N4001	G	400	1.5	0.3	0.025	2.0				
1N604A	S	1N4004	1N4001	G	400	1.5	0.3		2.0				
1N605	S	1N4005	1N4001	G	500	1.5	0.3	0.025	2.0				
1N605A	S	1N4005	1N4001	G	500	1.5	0.3	0.002	2.0				
1N606	S	1N4005	1N4001	G	600	1.5	0.3	0.025	2.0				
1N606A	S	1N4005	1N4001	G	600	1.5	0.3		2.0				
1N607	S	MR1120	MR1120	G	50	1.5	0.8	0.025	3.0				
1N607A	S	MR1120	MR1120	G	50	1.5	0.8	0.001	3.0				
1N608	S	MR1121	MR1120	G	100	1.5	0.8	0.025	3.0				
1N608A	S	MR1121	MR1120	G	100	1.5	0.8	0.001	3.0				
1N609	S	MR1122	MR1120	G	150	1.5	0.8	0.025	3.0				
1N609A	S	MR1122	MR1120	G	150	1.5	0.8	0.001	3.0				
1N610	S	MR1122	MR1120	G	200	1.5	0.8	0.025	3.0				
1N610A	S	MR1122	MR1120	G	200	1.5	0.8	0.001	3.0				
1N611	S	MR1123	MR1120	G	300	1.5	0.8	0.025	3.0				
1N611A	S	MR1123	MR1120	G	300	1.5	0.8	0.001	3.0				
1N612	S	MR1124	MR1120	G	400	1.5	0.8	0.025	3.0				
1N612A	S	MR1124	MR1120	G	400	1.5	0.8	1.5	3.0				
1N613	S	MR1125	MR1120	G	500	1.5	0.8	0.025	3.0				
1N613A	S	MR1125	MR1120	G	500	1.5	0.8	0.002	3.0				
1N614	S	MR1126	MR1120	G	600	1.5	0.8	0.025	3.0				
1N614A	S	MR1126	MR1120	G	600	1.5	0.8	2.5	3.0				
1N615	G			G	300		0.075	1.2	25				
1N616	G			S	20	1.0	8.0m	0.4m					
1N617	G			S	115	1.0	3.0m	11*					

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N618	G			S	115	1.0	5.0m	7.0*					
1N619	S			S	30	1.0	3.0m	0.08*					
1N622	S			S	150	1.0	7.0m	0.16*					
1N625	S			S		1.5	4.0m	1.0*	1.0				
1N626	S			S		1.5	4.0m	1.0*	1.0				
1N627	S			S		1.5	4.0m	1.0*	1.0				
1N628	S			S		1.5	4.0m	1.0*	1.0				
1N629	S			S		1.5	4.0m	1.0*	1.0				
1N630	S			M									
1N631	G			S	60				0.3				
1N632	G			S	60	1.0	7.0m		0.3				
1N633	G			S	80	1.0	125m		0.3				
1N634	G			S	100	1.0	50m	45*					
1N635	G			S	150	1.0	50m	175*					
1N636	G			S	60	1.0	2.5m	10*					
1N643	S			S	175	1.0	10m	1.0*	0.3				
1N643A	S			S	175	1.0	100m	1.0*	0.3				
1N645	S	1N4003	1N4001	S	225	1.0	400m	0.2*					
1N645A	S	1N4003	1N4001	S	225	1.0	400m	0.05*					
1N646	S	1N4004	1N4001	S	300	1.0	400m	0.2*					
1N647	S	1N4004	1N4001	S	400	1.0	400m	0.2*					
1N648	S	1N4005	1N4001	S	500	1.0	400m	0.2*					
1N649	S	1N4005	1N4001	S	600	1.0	400m	0.2*					
1N658	S			S	100	1.0	100m	0.05*	0.3				
1N658A	S			S	120	1.0	100m	25n	0.3				
1N659	S			S	50	1.0	6.0m	5.0*	0.3				
1N659A	S			S	60	1.0	10m	25n	0.3				
1N660	S			S	100	1.0	6.0m	5.0*	0.3				
1N660A	S			S	120	1.0	10m	25n	0.3				
1N661	S			S	200	1.0	6.0m	10*	0.3				
1N661A	S			S	240	1.0	10m	25n	0.3				
1N662	S			S	80	1.0	10m	1.0*	0.5				
1N662A	S			S	80	1.0	100m	1.0*	0.3				
1N663	S			S	80	1.0	100m	5.0*	0.5				
1N663A	S			S	80	1.0	100m	0.1*	0.3				
1N664	S	1N5237A	1N5221	Z						8.2	10	10	25m
1N665	S	1N5242A	1N5221	Z						12	10	10	0.25W
1N666	S	1N5245B	1N5221	Z						15	5.0	5.0	0.25W
1N667	S	1N5248A	1N5221	Z						18	5.0	10	0.25W
1N668	S	1N5251A	1N5221	Z						22	5.0	10	0.25W
1N669	S	1N5254A	1N5221	Z						27	5.0	10	0.25W
1N670	S	1N5266B	1N5221	Z						68	1.0	5.0	250m
1N671	S	1N5271A	1N5221	Z						100	1.0	10	0.25W
1N672	S	1N5276A	1N5221	Z						150	1.0	10	0.25W
1N673	S		1N5221	S	350	1.0	250m	1.0*					
1N674	S	1N5230A	1N5221	Z						4.7	20	10	250m
1N675	S	1N5234B	1N5221	Z						6.2	20	5.0	250m
1N676	S	1N4002	1N4001	G	100	1.0	0.075	0.2	3.0				
1N677	S	1N4002	1N4001	G	100	1.0	0.15	0.2	5.0				
1N678	S	1N4003	1N4001	G	200	1.0	0.075	0.2	3.0				
1N679	S	1N4003	1N4001	G	200	1.0	0.15	0.2	5.0				
1N681	S	1N4004	1N4001	G	300	1.0	0.075	0.2	3.0				
1N682	S	1N4004	1N4001	G	300	1.0	0.15	0.2	5.0				
1N683	S	1N4004	1N4001	G	400	1.0	0.075	0.2	3.0				
1N684	S	1N4004	1N4001	G	400	1.0	0.15	0.2	5.0				
1N685	S	1N4005	1N4001	G	500	1.0	0.075	0.2	3.0				
1N686	S	1N4005	1N4001	G	500	1.0	0.15	0.2	5.0				
1N687	S	1N4005	1N4001	G	600	1.0	0.075	0.2	3.0				
1N689	S	1N4005	1N4001	G	600	1.0	0.15	0.2	5.0				
1N690	S			S	36	1.0	400m	0.25*	0.8				
1N691	S			S	70	1.0	400m	0.25*	0.8				
1N692	S			S	100	1.0	400m	0.25*	0.8				
1N693	S			S	130	1.0	400m	0.25*	0.8				
1N695	G			S	20	1.0	100m	2.0*	0.3				
1N695A	G			S	25	0.5	10m	2.0*	0.3				
1N696	S			S	30	1.0	10m	15n	5.0				
1N697	S			S		1.0	0.25	1.0*					
1N698	G			S	25	0.65	30m	160*	0.5				
1N699	G			S	80	1.0	100m		0.3				
1N701	S	1N5240B	1N5221	Z						10.5	10		250m

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N702	S	1N5223A	1N5221	Z						3.2	5.0		250m
★1N702A	S	1N5223B	1N5221	Z						2.9	5.0		250m
★1N703	S	1N5227A	1N5221	Z						3.9	5.0		250m
★1N703A	S	1N5227B	1N5221	Z						3.67	5.0		250m
★1N704	S	1N5229A	1N5221	Z						4.5	5.0		250m
★1N704A	S	1N5229B	1N5221	Z						4.3	5.0		250m
★1N705	S	1N5230A	1N5221	Z						5.4	5.0		250m
★1N705A	S	1N5230B	1N5221	Z						5.12	5.0		250m
★1N706	S	1N5232A	1N5221	Z						6.4	5.0		250m
★1N706A	S	1N5232B	1N5221	Z						6.1	5.0		250m
★1N707	S	1N5236A	1N5221	Z						8.0	5.0		250m
★1N707A	S	1N5236B	1N5221	Z						7.55	5.0		250m
★1N708	S	1N5232A	1N5221	Z							25	10	250m
★1N708A	S	1N5232B	1N5221	Z							25	5.0	250m
★1N709	S	1N5234A	1N5221	Z							25	10	250m
★1N709A	S	1N5234B	1N5221	Z							25	5.0	250m
★1N710	S	1N5235A	1N5221	Z							25	10	250m
★1N710A	S	1N5235B	1N5221	Z							25	5.0	250m
★1N711	S	1N5236A	1N5221	Z							25	10	250m
★1N711A	S	1N5236B	1N5221	Z							25	5.0	250m
★1N712	S	1N5237A	1N5221	Z							25	10	250m
★1N712A	S	1N5237B	1N5221	Z							25	5.0	250m
★1N713	S	1N5239A	1N5221	Z							12	10	250m
★1N713A	S	1N5239B	1N5221	Z							12	5.0	250m
★1N714	S	1N5240A	1N5221	Z							12	10	250m
★1N714A	S	1N5240B	1N5221	Z							12	5.0	250m
★1N715	S	1N5241A	1N5221	Z							12	10	250m
★1N715A	S	1N5241B	1N5221	Z							12	5.0	250m
★1N716	S	1N5242A	1N5221	Z							12	10	250m
★1N716A	S	1N5242B	1N5221	Z							12	5.0	250m
★1N717	S	1N5243A	1N5221	Z							12	10	250m
★1N717A	S	1N5243B	1N5221	Z							12	5.0	250m
★1N718	S	1N5245A	1N5221	Z							12	10	250m
★1N718A	S	1N5245B	1N5221	Z							12	5.0	250m
★1N719	S	1N5246A	1N5221	Z							12	10	250m
★1N719A	S	1N5246B	1N5221	Z							12	5.0	250m
★1N720	S	1N5248A	1N5221	Z							12	10	250m
★1N720A	S	1N5248B	1N5221	Z							12	5.0	250m
★1N721	S	1N5250A	1N5221	Z							4.0	10	250m
★1N721A	S	1N5250B	1N5221	Z							4.0	5.0	250m
★1N722	S	1N5251A	1N5221	Z						22	4.0	10	250m
★1N722A	S	1N5251B	1N5221	Z						22	4.0	5.0	250m
★1N723	S	1N5252A	1N5221	Z						24	4.0	10	250m
★1N723A	S	1N5252B	1N5221	Z						24	4.0	5.0	250m
★1N724	S	1N5254A	1N5221	Z						27	4.0	10	250m
★1N724A	S	1N5254B	1N5221	Z						27	4.0	5.0	250m
★1N725	S	1N5256A	1N5221	Z						30	4.0	10	250m
★1N725A	S	1N5256B	1N5221	Z						30	4.0	5.0	250m
★1N726	S	1N5257A	1N5221	Z						33	4.0	10	250m
★1N726A	S	1N5257B	1N5221	Z						33	4.0	5.0	250m
★1N727	S	1N5258A	1N5221	Z						36	4.0	10	250m
★1N727A	S	1N5258B	1N5221	Z						36	4.0	5.0	250m
★1N728	S	1N5259A	1N5221	Z						39	4.0	10	250m
★1N728A	S	1N5259B	1N5221	Z						39	4.0	5.0	250m
★1N729	S	1N5260A	1N5221	Z						43	4.0	10	250m
★1N729A	S	1N5260B	1N5221	Z						43	4.0	5.0	250m
★1N730	S	1N5261A	1N5221	Z						47	4.0	10	250m
★1N730A	S	1N5261B	1N5221	Z						47	4.0	5.0	250m
★1N731	S	1N5262A	1N5221	Z						51	4.0	10	250m
★1N731A	S	1N5262B	1N5221	Z						51	4.0	5.0	250m
★1N732	S	1N5263A	1N5221	Z						56	4.0	10	250m
★1N732A	S	1N5263B	1N5221	Z						56	4.0	5.0	250m
★1N733	S	1N5265A	1N5221	Z						62	2.0	10	250m
★1N733A	S	1N5265B	1N5221	Z						62	2.0	5.0	250m
★1N734	S	1N5266A	1N5221	Z						68	2.0	10	250m
★1N734A	S	1N5266B	1N5221	Z						68	2.0	5.0	250m
★1N735	S	1N5267A	1N5221	Z						75	2.0	10	250m
★1N735A	S	1N5267B	1N5221	Z						75	2.0	5.0	250m
★1N736	S	1N5268A	1N5221	Z						82	2.0	10	250m
★1N736A	S	1N5268B	1N5221	Z						82	2.0	5.0	250m

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N737	S	1N5270A	1N5221	Z						91	1.0	10	250m
★1N737A	S	1N5270B	1N5221	Z						91	1.0	5.0	250m
★1N738	S	1N5271A	1N5221	Z						100	1.0	10	250m
★1N738A	S	1N5271B	1N5221	Z						100	1.0	5.0	250m
★1N739	S	1N5272A	1N5221	Z						110	1.0	10	250m
★1N739A	S	1N5272B	1N5221	Z						110	1.0	5.0	250m
★1N740	S	1N5273A	1N5221	Z						120	1.0	10	250m
★1N740A	S	1N5273B	1N5221	Z						120	1.0	5.0	250m
★1N741	S	1N5274A	1N5221	Z						130	1.0	10	250m
★1N741A	S	1N5274B	1N5221	Z						130	1.0	5.0	250m
★1N742	S	1N5276A	1N5221	Z						150	1.0	10	250m
★1N742A	S	1N5276B	1N5221	Z						150	1.0	5.0	250m
★1N743	S	1N5277A	1N5221	Z						160	1.0	10	250m
★1N743A	S	1N5277B	1N5221	Z						160	1.0	5.0	250m
★1N744	S	1N5279A	1N5221	Z						180	1.0	10	250m
★1N744A	S	1N5279B	1N5221	Z						180	1.0	5.0	250m
★1N745	S	1N5281A	1N5221	Z						200	1.0	0	250m
★1N745A	S	1N5281B	1N5221	Z						200	1.0	5.0	250m
★1N746	S		1N746	Z						3.3	20	10	400m
★1N746A	S		1N746	Z						3.3	20	5.0	400m
★1N747	S		1N746	Z						3.6	20	10	400m
★1N747A	S		1N746	Z						3.6	20	5.0	400m
★1N748	S		1N746	Z						3.9	20	10	400m
★1N748A	S		1N746	Z						3.9	20	5.0	400m
★1N749	S		1N746	Z						4.3	20	10	400m
★1N749A	S		1N746	Z						4.3	20	5.0	400m
★1N750	S		1N746	Z						4.7	20	10	400m
★1N750A	S		1N746	Z						4.7	20	5.0	400m
★1N751	S		1N746	Z						5.1	20	10	400m
★1N751A	S		1N746	Z						5.1	20	5.0	400m
★1N752	S		1N746	Z						5.6	20	10	400m
★1N752A	S		1N746	Z						5.6	20	5.0	400m
★1N753	S		1N746	Z						6.2	20	10	400m
★1N753A	S		1N746	Z						6.2	20	5.0	400m
★1N754	S		1N746	Z						6.8	20	10	400m
★1N754A	S		1N746	Z						6.8	20	5.0	400m
★1N755	S		1N746	Z						7.5	20	10	400m
★1N755A	S		1N746	Z						7.5	20	5.0	400m
★1N756	S		1N746	Z						8.2	20	10	400m
★1N756A	S		1N746	Z						8.2	20	5.0	400m
★1N757	S		1N746	Z						9.1	20	10	400m
★1N757A	S		1N746	Z						9.1	20	5.0	400m
★1N758	S		1N746	Z						10.0	20	10	400m
★1N758A	S		1N746	Z						10.0	20	5.0	400m
★1N759	S		1N746	Z						12.0	20	10	400m
★1N759A	S		1N746	Z						12.0	20	5.0	400m
★1N761	S	1N5230A	1N5221	Z						5.4	10		250m
★1N762	S	1N5232B	1N5221	Z						6.4	10		250m
★1N763	S	1N5238B	1N5221	Z						8.0	10		250m
★1N764	S	1N5238A	1N5221	Z						10.0	10		250m
★1N765	S	1N5240A	1N5221	Z						12.0	5.0		250m
★1N766	S	1N5243A	1N5221	Z						14.5	5.0		250m
★1N767	S	1N5246A	1N5221	Z						18	5.0		250m
★1N768	S	1N5249A	1N5221	Z						21	5.0		250m
★1N769	S	1N5252A	1N5221	Z						27	5.0		250m
1N770	G			S	20	0.42	5.0m	40*	0.35				
1N771	G			S	80	1.0	100m	25*					
1N771A	G			S	80	1.0	200m	25*					
1N771B	G			S	80	1.0	400m	25*					
1N772	G			S	70	1.0	100m	50*					
1N772A	G			S	70	1.0	200m	50*					
1N773	G			S	65	1.0	100m	10*					
1N773A	G			S	65	1.0	200m	10*					
1N774	G			S	60	1.0	100m	15*					
1N774A	G			S	60	1.0	200m	15*					
1N775	G			S	60	1.0	100m	20*					
1N776	G			S	20	1.0	50m	200*					
1N777	G			S	60	1.0	100m	25*	3.5				
1N778	S			S	100	1.0	10m	0.5*	0.3				
1N779	S			S	175	1.0	10m	0.5*	0.3				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N781	G			S	40	0.45	10m	5.0*	0.5				
1N781A	G			S	40	0.45	10m	5.0*	0.5				
1N789	S			S		1.0	10m	1.0*	0.5				
1N790	S			S		1.0	10m	5.0*	0.25				
1N791	S			S		1.0	50m	5.0*	0.5				
1N792	S			S		1.0	100m	5.0*	0.5				
1N793	S			S		1.0	10m	1.0*	0.5				
1N794	S			S		1.0	10m	5.0*	0.25				
1N795	S			S		1.0	50m	5.0*	0.5				
1N796	S			S		1.0	100m	5.0*	0.5				
1N797	S			S		1.0	10m	1.0*	0.5				
1N798	S			S		1.0	10m	5.0*	0.25				
1N799	S			S		1.0	50m	5.0*	0.5				
1N800	S			S		1.0	100m	5.0*	0.5				
1N801	S			S		1.0	10m	1.0*	0.5				
1N802	S			S		1.0	50m	5.0*	0.5				
1N803	S			S		1.0	10m	5.0*	0.5				
1N804	S			S		1.0	50m	10*	0.5				
1N805	G			S	40	1.0	3.0m	100*					
1N806	S			S	100	1.0	4.0m	0.5*	0.3				
1N807	S			S	180	1.0	4.0m	0.5*	0.3				
1N808	S			S	100	1.0	100m	1.0*	0.3				
1N809	S			S	200	1.0	100m	1.0*	0.3				
1N810	S			S	50	1.0	10m	1.0*	50				
1N811	S			S	20	1.0	1.0m	1.0*	0.25				
1N812	S			S	30	1.0	1.0m	0.1*	0.25				
1N813	S			S	15	1.0	5.0m	0.5*	0.25				
1N814	S			S	40	1.0	2.0m	0.1*	0.25				
1N815	S			S	15	1.5	100m	0.5*	0.25				
1N816	S			S	6.0	1.0	100m	0.1*					
1N817	S			S	200	1.5	6.0m	20*	1.0				
1N818	S			S	80	1.5	30m	0.25*	0.5				
1N819	S			S	80	1.0	200m	25n					
★1N821	S		1N821	R						6.2	0.01	7.5	-55/100
★1N821A	S		1N821	R						6.2	0.01	7.5	-55/100
1N822	S			R						6.2	0.01	7.5	-55/100
★1N823	S		1N821	R						6.2	0.005	7.5	-55/100
★1N823A	S		1N821	R						6.2	0.005	7.5	-55/100
1N824	S			R						6.2	0.005	7.5	-55/100
★1N825	S		1N821	R						6.2	0.002	7.5	-55/100
★1N825A	S		1N821	R						6.2	0.002	7.5	-55/100
1N826	S	1N825	1N821	R						6.5	0.002	7.5	-55/100
★1N827	S		1N821	R						6.2	0.001	7.5	-55/100
★1N827A	S		1N821	R						6.2	0.001	7.5	-55/100
1N828	S	1N827	1N821	R						6.5	0.001	7.5	-55/100
★1N829	S		1N821	R						6.2	0.0005	7.5	-55/100
1N830	S		Table 4	M									
1N830A	S		Table 4	M									
1N831	S		Table 4	M									
1N831A	S		Table 4	M									
1N831B	S		Table 4	M									
1N832	S		Table 4	M									
1N832A	S		Table 4	M									
1N832B	S		Table 4	M									
1N832D			Table 4	M									
1N833	S		Table 4	M									
1N833A	S		Table 4	M									
1N835	G			S	30	0.5	5.0m	20*	0.5				
1N836	G			S	5.0								
1N837	S			S		1.0	150m	0.1*	0.5				
1N837A	S			S		1.0	150m	0.1*	0.3				
1N838	S			S		1.0	150m	0.1*	0.5				
1N839	S			S		1.0	150m	0.1*	0.5				
1N840	S			S		1.0	150m	0.1*	0.3				
1N841	S			S		1.0	150m	0.1*	0.3				
1N842	S			S		1.0	150m	0.1*	0.3				
1N843	S			S		1.0	150m	0.1*	0.3				
1N844	S			S		1.0	200m	0.1*	0.5				
1N845	S			S		1.0	200m	0.1*	0.5				
1N846	S	1N4001	1N4001	G	50	0.6	200m	20*					

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS / SIGNAL DIODES					ZENER DIODES / REFERENCE DIODES			
					V_{RWM} Volts / PRV Volts	V_F Volts	I_O Amp / V_F @ I_F	I_R mA / I_R	I_{FSM} Amp / t_{rr} µs	V_Z Nom Volts	I_{ZT} mA / T_C %/°C	Tol V_Z ±% / I_{ZT} mA	P_D / Temp Range °C
1N847	S	1N4002	1N4001	G	100	0.6	200m	20*					
1N848	S	1N4003	1N4001	G	200	0.6	200m	20*					
1N849	S	1N4004	1N4001	G	300	0.6	200m	20*					
1N850	S	1N4004	1N4001	G	400	0.6	200m	20*					
1N851	S	1N4005	1N4001	G	500	0.6	200m	20*					
1N852	S	1N4005	1N4001	G	600	0.6	200m	20*					
1N853	S	1N4006	1N4001	G	700	0.6	200m	20*					
1N854	S	1N4006	1N4001	G	800	0.6	200m	20*					
1N855	S	1N4007	1N4001	G	900	0.6	200m	20*					
1N856	S	1N4007	1N4001	G	1.0k	0.6	200m	20*					
1N857	S	1N4001	1N4001	G	50	0.6	150m	20*					
1N858	S	1N4002	1N4001	G	100	0.6	150m	20*					
1N859	S	1N4003	1N4001	G	200	0.6	150m	20*					
1N860	S	1N4004	1N4001	G	300	0.6	150m	20*					
1N861	S	1N4004	1N4001	G	400	0.6	150m	20*					
1N862	S	1N4005	1N4001	G	500	0.6	150m	20*					
1N863	S	1N4005	1N4001	G	600	0.6	150m	20*					
1N864	S	1N4006	1N4001	G	700	0.6	150m	20*					
1N865	S	1N4006	1N4001	G	800	0.6	150m	20*					
1N866	S	1N4007	1N4001	G	900	0.6	150m	20*					
1N867	S	1N4007	1N4001	G	1.0k	0.6	150m	20*					
1N868	S	1N4001	1N4001	G	50	0.6	100m	20*					
1N869	S	1N4002	1N4001	G	100	0.6	100m	20*					
1N870	S	1N4003	1N4001	G	200	0.6	100m	20*					
1N871	S	1N4004	1N4001	G	300	0.6	100m	20*					
1N872	S	1N4004	1N4001	G	400	0.6	100m	20*					
1N873	S	1N4005	1N4001	G	500	0.6	100m	20*					
1N874	S	1N4005	1N4001	G	600	0.6	100m	20*					
1N875	S	1N4006	1N4001	G	700	0.6	100m	20*					
1N876	S	1N4006	1N4001	G	800	0.6	100m	20*					
1N877	S	1N4007	1N4001	G	900	0.6	100m	20*					
1N878	S	1N4007	1N4001	G	1.0k	0.6	100m	20*					
1N879	S	1N4001	1N4001	G	50	0.6	50m	20*					
1N880	S	1N4002	1N4001	G	100	0.6	50m	20*					
1N881	S	1N4003	1N4001	G	200	0.6	50m	20*					
1N882	S	1N4004	1N4001	G	300	0.6	50m	20*					
1N883	S	1N4004	1N4001	G	400	0.6	50m	20*					
1N884	S	1N4005	1N4001	G	500	0.6	50m	20*					
1N885	S	1N4005	1N4001	G	600	0.6	50m	20*					
1N886	S	1N4006	1N4001	G	700	0.6	50m	20*					
1N887	S	1N4006	1N4001	G	800	0.6	50m	20*					
1N888	S	1N4007	1N4001	G	900	0.6	50m	20*					
1N889	S	1N4007	1N4001	G	1.0k	0.6	50m	20*					
1N890	S			S	60	1.0	20m	25n					
1N891	S			S		1.0	50m	0.1*	0.3				
1N892	S			S		1.0	50m	0.1*	0.3				
1N893	S			S		1.0	50m	0.1*	0.3				
1N894	G			S	5.0								
1N895	G			S	5.0								
1N896	G			S	5.0								
1N897	S			S	2.5	1.0	5.0m	0.1*	1.0				
1N898	S			S	2.5	1.0	100m	5.0*	0.3				
1N899	S			S	85	1.0	5.0m	0.1*	0.3				
1N900	S			S	85	1.0	50m	0.1*	0.3				
1N901	S			S	85	1.0	100m	0.5*	0.3				
1N902	S			S	170	1.0	10m	1.0*	0.3				
1N903	S			S	40	1.0	10m	0.1*	4.0				
1N903A	S			S	40	1.0	20m	0.1*	4.0				
1N904	S			S	30	1.0	10m	0.1*	4.0				
1N904A	S			S	30	1.0	20m	0.1*	4.0				
1N905	S			S	20	1.0	10m	0.1*	4.0				
1N905A	S			S	20	1.0	20m	0.1*	4.0				
1N906	S			S	20	1.0	10m	0.1*	4.0				
1N906A	S			S	20	1.0	20m	0.1*	4.0				
1N907	S			S	30	1.0	10m	0.1*	4.0				
1N907A	S			S	30	1.0	20m	0.1*	4.0				
1N908	S			S	40	1.0	10m	0.1*	4.0				
1N908A	S			S	40	1.0	20m	0.1*	4.0				
1N909	G			S	50	1.0	100m	10*					
1N910	G			S	30	1.0	100m	10*					

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N911	G			S	20	1.0	100m	10*					
1N912	S			S	10	0.62	1.0m	1.0*					
1N912A	S			S	10	0.62	1.0m	1.0*					
1N913	S			S	10	0.62	1.0m	5.0*					
1N913A	S			S	10	0.62	1.0m	1.0*					
1N914	S			S	75	1.0	10m	5.0*	4.0				
1N914A	S			S	75	1.0	20m	5.0*	4.0				
1N914B	S			S	75	1.0	100m	5.0*	4.0				
1N915	S			S	50	1.0	50m	5.0*	10				
1N916	S			S	75	1.0	10m	5.0*	4.0				
1N916A	S			S	75	1.0	20m	5.0*	4.0				
1N916B	S			S	75	1.0	30m	5.0*	4.0				
1N917	S			S	30	1.0	10m	0.05*	3.0				
1N918	S		Table 4	M									
1N919	S			S	150	1.0	100m	0.5*	0.3				
1N920	S			S	36	1.0	500m	0.25*	0.3				
1N921	S			S	70	1.0	500m	0.25*	0.3				
1N922	S			S	100	1.0	500m	0.25*	0.3				
1N923	S			S	130	1.0	500m	0.25*	0.3				
1N925	S			S	32	1.0	5.0m	1.0*	0.15				
1N926	S			S	32	1.0	5.0m	0.1*	0.15				
1N927	S			S	52	1.0	10m	0.1*	0.15				
1N928	S			S	96	1.0	10m	0.1*	0.15				
1N929	S			S	20	1.0	20m	0.1*					
1N930	S			S	50	1.0	20m	0.1*					
1N931	S			S	100	1.0	20m	0.1*					
1N932	S			S	200	1.0	20m	0.1*					
1N933	G			S	100	1.0	14m	10*	0.4				
1N934	S			S	60	1.0	30m	25n	1.0				
★1N935	S		1N935	R						9.0	0.01	7.5	0/75
★1N935A	S		1N935	R						9.0	0.01	7.5	-55/100
★1N935B	S		1N935	R						9.0	0.01	7.5	-55/150
★1N936	S		1N935	R						9.0	0.005	7.5	0/75
★1N936A	S		1N935	R						9.0	0.005	7.5	-55/100
★1N936B	S		1N935	R						9.0	0.005	7.5	-55/150
★1N937	S		1N935	R						9.0	0.002	7.5	0/75
★1N937A	S		1N935	R						9.0	0.002	7.5	-55/100
★1N937B	S		1N935	R						9.0	0.002	7.5	-55/150
★1N938	S		1N935	R						9.0	0.001	7.5	0/75
★1N938A	S		1N935	R						9.0	0.001	7.5	-55/100
★1N938B	S		1N935	R						9.0	0.001	7.5	-55/150
★1N939	S		1N935	R						9.0	0.0005	7.5	0/75
★1N939A	S		1N935	R						9.0	0.0005	7.5	-55/100
★1N939B	S		1N935	R						9.0	0.0005	7.5	-55/150
1N940	S			R						9.0	0.0002	7.5	0/75
1N940A	S			R						9.0	0.0002	7.5	-55/100
1N940B	S			R						9.0	0.0002	7.5	-55/150
★1N941	S		1N941	R						11.7	0.01	7.5	0/75
★1N941A	S		1N941	R						11.7	0.01	7.5	-55/100
★1N941B	S		1N941	R						11.7	0.01	7.5	-55/150
★1N942	S		1N941	R						11.7	0.005	7.5	0/75
★1N942A	S		1N941	R						11.7	0.005	7.5	-55/100
★1N942B	S		1N941	R						11.7	0.005	7.5	-55/150
★1N943	S		1N941	R						11.7	0.002	7.5	0/75
★1N943A	S		1N941	R						11.7	0.002	7.5	-55/100
★1N943B	S		1N941	R						11.7	0.002	7.5	-55/150
★1N944	S		1N941	R						11.7	0.001	7.5	0/75
★1N944A	S		1N941	R						11.7	0.001	7.5	-55/100
★1N944B	S		1N941	R						11.7	0.001	7.5	-55/150
★1N945	S		1N941	R						11.7	0.0005	7.5	0/75
★1N945A	S		1N941	R						11.7	0.0005	7.5	-55/100
★1N945B	S		1N941	R						11.7	0.0005	7.5	-55/150
1N946	S			R						11.7	0.0002	7.5	0/75
1N946A	S			R						11.7	0.0002	7.5	-55/100
1N946B	S			R						11.7	0.0002	7.5	-55/150
1N947	S			S		1.0	400m	2.0*					
1N948	S			S	36	1.5	100m	0.25*	1.0				
1N949	G			S	50	0.39	10m	10*					
1N950 thru	S		Table 3	V									

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N956			Table 3	V									
★1N957	S		1N957	Z						6.8	18.5	20	400m
★1N957A	S		1N957	Z						6.8	18.5	10	400m
★1N957B	S		1N957	Z						6.8	18.5	5.0	400m
★1N958	S		1N957	Z						7.5	16.5	20	400m
★1N958A	S		1N957	Z						7.5	16.5	10	400m
★1N958B	S		1N957	Z						7.5	16.5	5.0	400m
★1N959	S		1N957	Z						8.2	15	20	400m
★1N959A	S		1N957	Z						8.2	15	10	400m
★1N959B	S		1N957	Z						8.2	15	5.0	400m
★1N960	S		1N957	Z						9.1	14	20	400m
★1N960A	S		1N957	Z						9.1	14	10	400m
★1N960B	S		1N957	Z						9.1	14	5.0	400m
★1N961	S		1N957	Z						10	12.5	20	400m
★1N961A	S		1N957	Z						10	12.5	10	400m
★1N961B	S		1N957	Z						10	12.5	5.0	400m
★1N962	S		1N957	Z						11	11.5	20	400m
★1N962A	S		1N957	Z						11	11.5	10	400m
★1N962B	S		1N957	Z						11	11.5	5.0	400m
★1N963	S		1N957	Z						12	10.5	20	400m
★1N963A	S		1N957	Z						12	10.5	10	400m
★1N963B	S		1N957	Z						12	10.5	5.0	400m
★1N964	S		1N957	Z						13	9.5	20	400m
★1N964A	S		1N957	Z						13	9.5	10	400m
★1N964B	S		1N957	Z						13	9.5	5.0	400m
★1N965	S		1N957	Z						15	8.5	20	400m
★1N965A	S		1N957	Z						15	8.5	10	400m
★1N965B	S		1N957	Z						15	8.5	5.0	400m
★1N966	S		1N957	Z						16	7.8	20	400m
★1N966A	S		1N957	Z						16	7.8	10	400m
★1N966B	S		1N957	Z						16	7.8	5.0	400m
★1N967	S		1N957	Z						18	7.0	20	400m
★1N967A	S		1N957	Z						18	7.0	10	400m
★1N967B	S		1N957	Z						18	7.0	5.0	400m
★1N968	S		1N957	Z						20	6.2	20	400m
★1N968A	S		1N957	Z						20	6.2	10	400m
★1N968B	S		1N957	Z						20	6.2	5.0	400m
★1N969	S		1N957	Z						22	5.6	20	400m
★1N969A	S		1N957	Z						22	5.6	10	400m
★1N969B	S		1N957	Z						22	5.6	5.0	400m
★1N970	S		1N957	Z						24	5.2	20	400m
★1N970A	S		1N957	Z						24	5.2	10	400m
★1N970B	S		1N957	Z						24	5.2	5.0	400m
★1N971	S		1N957	Z						27	4.6	20	400m
★1N971A	S		1N957	Z						27	4.6	10	400m
★1N971B	S		1N957	Z						27	4.6	5.0	400m
★1N972	S		1N957	Z						30	4.2	20	400m
★1N972A	S		1N957	Z						30	4.2	10	400m
★1N972B	S		1N957	Z						30	4.2	5.0	400m
★1N973	S		1N957	Z						33	3.8	20	400m
★1N973A	S		1N957	Z						33	3.8	10	400m
★1N973B	S		1N957	Z						33	3.8	5.0	400m
★1N974	S		1N957	Z						36	3.4	20	400m
★1N974A	S		1N957	Z						36	3.4	10	400m
★1N974B	S		1N957	Z						36	3.4	5.0	400m
★1N975	S		1N957	Z						39	3.2	20	400m
★1N975A	S		1N957	Z						39	3.2	10	400m
★1N975B	S		1N957	Z						39	3.2	5.0	400m
★1N976	S		1N957	Z						43	3.0	20	400m
★1N976A	S		1N957	Z						43	3.0	10	400m
★1N976B	S		1N957	Z						43	3.0	5.0	400m
★1N977	S		1N957	Z						47	2.7	20	400m
★1N977A	S		1N957	Z						47	2.7	10	400m
★1N977B	S		1N957	Z						47	2.7	5.0	400m
★1N978	S		1N957	Z						51	2.5	20	400m
★1N978A	S		1N957	Z						51	2.5	10	400m
★1N978B	S		1N957	Z						51	2.5	5.0	400m
★1N979	S		1N957	Z						56	2.2	20	400m
★1N979A	S		1N957	Z						56	2.2	10	400m
★1N979B	S		1N957	Z						56	2.2	5.0	400m

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N980	S		1N957	Z						62	2.0	20	400m
★1N980A	S		1N957	Z						62	2.0	10	400m
★1N980B	S		1N957	Z						62	2.0	5.0	400m
★1N981	S		1N957	Z						68	1.8	20	400m
★1N981A	S		1N957	Z						68	1.8	10	400m
★1N981B	S		1N957	Z						68	1.8	5.0	400m
★1N982	S		1N957	Z						75	1.7	20	400m
★1N982A	S		1N957	Z						75	1.7	10	400m
★1N982B	S		1N957	Z						75	1.7	5.0	400m
★1N983	S		1N957	Z						82	1.5	20	400m
★1N983A	S		1N957	Z						82	1.5	10	400m
★1N983B	S		1N957	Z						82	1.5	5.0	400m
★1N984	S		1N957	Z						91	1.4	20	400m
★1N984A	S		1N957	Z						91	1.4	10	400m
★1N984B	S		1N957	Z						91	1.4	5.0	400m
★1N985	S		1N957	Z						100	1.3	20	400m
★1N985A	S		1N957	Z						100	1.3	10	400m
★1N985B	S		1N957	Z						100	1.3	5.0	400m
★1N986	S		1N957	Z						110	1.1	20	400m
★1N986A	S		1N957	Z						110	1.1	10	400m
★1N986B	S		1N957	Z						110	1.1	5.0	400m
★1N987	S		1N957	Z						120	1.0	20	400m
★1N987A	S		1N957	Z						120	1.0	10	400m
★1N987B	S		1N957	Z						120	1.0	5.0	400m
★1N988	S		1N957	Z						130	0.95	20	400m
★1N988A	S		1N957	Z						130	0.95	10	400m
★1N988B	S		1N957	Z						130	0.95	5.0	400m
★1N989	S		1N957	Z						150	0.85	20	400m
★1N989A	S		1N957	Z						150	0.85	10	400m
★1N989B	S		1N957	Z						150	0.85	5.0	400m
★1N990	S		1N957	Z						160	0.80	20	400m
★1N990A	S		1N957	Z						160	0.80	10	400m
★1N990B	S		1N957	Z						160	0.80	5.0	400m
★1N991	S		1N957	Z						180	0.68	20	400m
★1N991A	S		1N957	Z						180	0.68	10	400m
★1N991B	S		1N957	Z						180	0.68	5.0	400m
★1N992	S		1N957	Z						200	0.65	20	400m
★1N992A	S		1N957	Z						200	0.65	10	400m
★1N992B	S		1N957	Z						200	0.65	5.0	400m
1N993	S			S	20	1.2	10m	1.0*	4.0				
1N994	G			S	6.5	1.0	10m	30*	2.0				
1N995	G			S	15	0.5	10m	10*	6.0				
1N996	G			S	20	0.8	40m	15*	0.3				
1N997	S			S	35	1.0	10m	25n	0.15				
1N998	S			S	150	1.0	200m	1.0n					
1N999	S			S	100	1.0	50m	1.0n	4.0				
1N1005	G			G	380	0.15	0.25						
1N1007	G			G	380	0.3	0.35						
1N1008	G			G	380	0.3	0.4						
1N1013	G			G	380	0.15	0.25						
1N1016	G			G	380	0.15	0.4						
1N1021	G			G	380	0.15	0.25						
1N1022	G			G	380	0.15	0.3						
1N1023	G			G	380	0.15	0.35						
1N1024	G			G	380	0.15	0.4						
1N1028	S	1N4001	1N4001	G	50	1.5	0.25		15				
1N1029	S	1N4002	1N4001	G	100	1.5	0.25		15				
1N1030	S	1N4003	1N4001	G	150	1.5	0.25		15				
1N1031	S	1N4003	1N4001	G	200	1.5	0.25		15				
1N1032	S	1N4004	1N4001	G	300	1.5	0.25		15				
1N1033	S	1N4004	1N4001	G	400	1.5	0.25		15				
1N1034	S			G	50	1.5	0.5		15				
1N1035	S			G	100	1.5	0.5		15				
1N1036	S			G	150	1.5	0.5		15				
1N1037	S			G	200	1.5	0.5		15				
1N1038	S			G	300	1.5	0.5		15				
1N1039	S			G	400	1.5	0.5		15				
1N1040	S			G	50	1.5	0.5		15				
1N1041	S			G	100	1.5	0.5		15				
1N1042	S			G	150	1.5	0.5		15				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N1043	S			G	200	1.5	0.5		15				
1N1044	S			G	300	1.5	0.5		15				
1N1045	S			G	400	1.5	0.5		15				
1N1046	S			G	50	1.5	0.5		15				
1N1047	S			G	100	1.5	0.5		15				
1N1048	S			G	150	1.5	0.5		15				
1N1049	S			G	200	1.5	0.5		15				
1N1050	S			G	300	1.5	0.5		15				
1N1051	S			G	400	1.5	0.5		15				
1N1052	S	1N4001	1N4001	G	50	1.5	0.5		20				
1N1053	S	1N4002	1N4001	G	100	1.5	0.5		20				
1N1054	S	1N4003	1N4001	G	150	1.5	0.5		20				
1N1055	S	1N4003	1N4001	G	200	1.5	0.5		20				
1N1056	S	1N4004	1N4001	G	300	1.5	0.5		20				
1N1057	S	1N4004	1N4001	G	400	1.5	0.5		20				
1N1058	S			G	50	1.5	1.5		20				
1N1059	S			G	100	1.5	1.5		20				
1N1060	S			G	150	1.5	1.5		20				
1N1061	S			G	200	1.5	1.5		20				
1N1062	S			G	300	1.5	1.5		20				
1N1063	S			G	400	1.5	1.5		20				
1N1064	S			G	50	1.5	1.5		20				
1N1065	S			G	100	1.5	1.5		20				
1N1066	S			G	150	1.5	1.5		20				
1N1067	S			G	200	1.5	1.5		20				
1N1068	S			G	300	1.5	1.5		20				
1N1069	S			G	400	1.5	1.5		20				
1N1070	S			G	50	1.5	1.5		20				
1N1071	S			G	100	1.5	1.5		20				
1N1072	S			G	150	1.5	1.5		20				
1N1973	S			G	200	1.5	1.5		20				
1N1074	S			G	300	1.5	1.5		20				
1N1075	S			G	400	1.5	1.5		20				
1N1076	S			G	50	1.5	5.0		50				
1N1077	S			G	100	1.5	5.0		50				
1N1078	S			G	150	1.5	5.0		50				
1N1079	S			G	200	1.5	5.0		50				
1N1080	S			G	300	1.5	5.0		50				
1N1081	S	1N4002	1N4001	G	100	1.5	0.25		15				
1N1082	S	1N4003	1N4001	G	200	1.5	0.25		15				
1N1083	S	1N4004	1N4001	G	300	1.5	0.25		15				
1N1084	S	1N4004	1N4001	G	400	1.5	0.25		15				
1N1085	S			G	100	1.5	0.6		24				
1N1086	S			G	200	1.5	0.6		24				
1N1087	S			G	300	1.5	0.6		24				
1N1088	S			G	400	1.5	0.6		24				
1N1089	S			G	100	1.5	2.0		24				
1N1090	S			G	200	1.5	2.0		24				
1N1091	S			G	300	1.5	2.0		24				
1N1092	S			G	400	1.5	2.0		24				
1N1093	G			S	15	0.4	5.0m	25*	0.5				
1N1095	S	1N4005	1N4001	G	500	0.5	0.425	0.3	15				
1N1096	S	1N4005	1N4001	G	600	0.5	0.4	0.3	15				
1N1100	S	1N4002	1N4001	G	100	1.2	0.25	0.2	15				
1N1101	S	1N4003	1N4001	G	200	1.2	0.25	0.2	15				
1N1102	S	1N4004	1N4001	G	300	1.2	0.25	0.2	15				
1N1103	S	1N4004	1N4001	G	400	1.2	0.25	0.2	15				
1N1104	S	1N4005	1N4001	G	500	1.2	0.25	0.2	15				
1N1105	S	1N4005	1N4001	G	600	1.2	0.25	0.2	15				
1N1108	S			G	800	3.0	0.225		13.5				
1N1109	S			G	1200	4.5	0.212		12.7				
1N1110	S			G	1600	6.0	0.2		12				
1N1111	S			G	2000	7.5	0.187		11.2				
1N1112	S			G	2400	9.0	0.175		10.5				
1N1113	S			G	2800	10.5	0.162		9.7				
1N1115	S	MR1121	MR1120	G	100	0.65	0.6	0.4	15				
1N1116	S	MR1122	MR1120	G	200	0.65	0.6	0.3	15				
1N1117	S	MR1123	MR1120	G	300	0.65	0.6	0.3	15				
1N1118	S	MR1124	MR1120	G	400	0.65	0.6	0.3	15				
1N1119	S	MR1125	MR1120	G	500	0.65	0.6	0.3	15				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N1120	S	MR1126	MR1120	G	600	0.65	0.6	0.3	15				
★1N1124	S			G	200	1.1	3.0	0.3	25				
★1N1124A	S	1N1124		G	200		3.3	0.3	25				
★1N1125	S			G	300	1.1	3.0	0.3	25				
★1N1125A	S	1N1125		G	300		3.3	0.3	25				
★1N1126	S			G	400	1.1	3.0	0.3	25				
★1N1126A	S	1N1126		G	400		3.3	0.3	25				
★1N1127	S			G	500	1.1	3.0	0.3	25				
★1N1127A	S	1N1126		G	500		3.3	0.3	25				
★1N1128	S			G	600	1.1	3.0	0.3	25				
★1N1128A	S	1N1126		G	600		3.3	0.3	25				
1N1130	S			G	1500	15	0.3	0.05					
1N1131	S			G	1500	15	0.3	0.05					
1N1132	S		Table 4	M									
1N1133	S			G	1500	15	0.085	0.025	3.5				
1N1134	S			G	1500	7.5	0.115	0.025	3.5				
1N1135	S			G	1800	18	0.075	0.025	3.5				
1N1136	S			G	1800	9.0	0.095	0.025	3.5				
1N1137	S			G	2400	24	0.057	0.025	3.5				
1N1138	S			G	2400	12	0.070	0.025	3.5				
1N1139	S			G	3600	27	0.075	0.025	3.5				
1N1140	S			G	3600	18	0.075	0.025	3.5				
1N1141	S			G	4800	36	0.070	0.025	3.5				
1N1142	S			G	4800	24	0.057	0.025	3.5				
1N1143	S			G	6000	45	0.057	0.025	3.5				
1N1143A	S			G	6000	30	0.075	0.025	3.5				
1N1144	S			G	7200	54	0.057	0.025	3.5				
1N1145	S			G	7200	36	0.070	0.025	3.5				
1N1146	S			G	8000	60	0.050	0.025	3.5				
1N1147	S			G	12k	60	0.050	0.025	3.5				
1N1148	S			G	14k	52	0.057	0.025	3.5				
1N1149	S			G	16k	60	0.050	0.025	3.5				
1N1150	S			G	1600		0.75		8.0				
1N1150A	S			G	1600	6.5	0.375	1.0	10				
1N1157	S			G	50		20		200				
1N1158	S			G	100		20						
1N1159	S			G	200		20						
1N1160	S			G	300		20						
1N1161	S			G	50		35		350				
1N1162	S			G	100		35		350				
1N1163	S			G	200		35		350				
1N1164	S			G	300		35		350				
1N1165	S			G	50		100		1000				
1N1166	S			G	100		100		1000				
1N1167	S			G	200		100		1000				
1N1168	S			G	300		100		1000				
1N1169	S	1N4004	1N4001	G			0.5						
1N1169A	S	1N4004	1N4001	G	400		0.5	3.5					
1N1170	G			S	50	1.0	4.0m	5.0*					
1N1171	S			G	50		20						
1N1172	S			G	100		20						
1N1173	S			G	200		20						
1N1174	S			G	300		20						
1N1175	S			G	50		35		350				
1N1176	S			G	100		35		350				
1N1177	S			G	200		35		350				
1N1178	S			G	300		35		350				
1N1179	S			G	50		100		1000				
1N1180	S			G	100		100		1000				
1N1181	S			G	200		100		1000				
1N1182	S			G	300		100		1000				
★1N1183	S		1N1183	G	50	1.7	35	10	500				
★1N1183A	S			G	50	1.1	40	5.0					
★1N1184	S		1N1183	G	100	1.7	35	10	500				
★1N1184A	S			G	100	1.1	40	5.0					
★1N1185	S		1N1183	G	150	1.7	35	10	500				
★1N1185A	S			G	150	1.1	40	5.0					
★1N1186	S		1N1183	G	200	1.7	35	10	500				
★1N1186A	S			G	200	1.1	40	5.0					
★1N1187	S		1N1183	G	300	1.7	35	10	500				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N1187A	S			G	300	1.1	40	5.0					
★1N1188	S		1N1183	G	400	1.7	35	10	500				
★1N1188A	S			G	400	1.1	40	5.0					
★1N1189	S		1N1183	G	500	1.7	35	10	500				
★1N1189A	S			G	500	1.2	40	2.0	800				
★1N1190	S		1N1183	G	600	1.7	35	10	500				
1N1190A	S			G	600	1.2	40	1.8	800				
★1N1191	S		1N248B	G	50	2.35	18	5.0	220				
1N1191A	S			G	50	2.0	22	2.5	500				
★1N1192	S		1N248B	G	100	2.35	18	5.0	220				
1N1192A	S			G	100	2.0	22	2.5	500				
★1N1193	S		1N248B	G	150	2.35	18	5.0	220				
1N1193A	S			G	150	2.0	22	2.5	500				
★1N1194	S		1N248B	G	200	2.35	18	5.0	220				
1N1194A	S			G	200	2.0	22	2.5	500				
★1N1195	S		1N248B	G	300	2.35	18	5.0	220				
★1N1195A	S		1N248B	G	300	0.6	20	3.2	350				
★1N1196	S		1N248B	G	400	2.35	18	5.0	220				
★1N1196A	S		1N248B	G	400	0.6	20	2.5	350				
★1N1197	S		1N248B	G	500	2.35	18	5.0	220				
★1N1197A	S		1N248B	G	500	0.6	20	2.2	350				
★1N1198	S		1N248B	G	600	2.35	18	5.0	220				
★1N1198A	S		1N248B	G	600	0.6	20	1.5	350				
★1N1199	S			G	50		12	10					
★1N1199A	S	1N1199		G	50	1.35	12	3.0	240				
1N1199B	S			G	50	1.2	12	0.9	250				
★1N1200	S			G	100		12	10					
★1N1200A	S	1N1200		G	100	1.35	50	2.5	240				
1N1200B	S			G	100	1.2	12	0.9	250				
★1N1201	S			G	150		12	10					
★1N1201A	S	1N1201		G	150	1.35	50	2.25	240				
1N1201B	S			G	150	1.2	12	0.9	250				
★1N1202	S			G	200		12	10					
★1N1202A	S	1N1202		G	200	1.35	50	2.0	240				
1N1202B	S			G	200	1.2	12	0.9	250				
★1N1203	S			G	300		12	10					
★1N1203A	S	1N1203		G	300	1.35	50	1.75	240				
1N1203B	S			G	300	1.2	12	0.9	250				
★1N1204	S			G	400		12	10					
★1N1204A	S	1N1204		G	400	1.35	50	1.5	240				
1N1204B	S			G	400	1.2	12	0.9	250				
★1N1205	S			G	500		12	10					
★1N1205A	S	1N1205		G	500	1.35	50	1.25	240				
1N1205B	S			G	500	1.2	12	0.9	250				
★1N1206	S			G	600		12	10					
★1N1206A	S	1N1206		G	600	1.35	50	1.0	240				
1N1206B	S			G	600	1.2	12	0.9	250				
1N1217	S	1N4001	1N4001	G	50	1.0	1.6	1.5	20				
1N1217A	S	1N4001	1N4001	G	50	1.5	1.6	0.05					
1N1217B	S			G	50	1.7	1.35	0.3	25				
1N1218	S	1N4002	1N4001	G	100	1.0	1.6	1.5	20				
1N1218A	S	1N4002	1N4001	G	100	1.5	1.6	0.05					
1N1218B	S			G	100	1.7	1.35	0.3	25				
1N1219	S	1N4003	1N4001	G	150	1.0	1.6	1.5	20				
1N1219A	S	1N4003	1N4001	G	150	1.5	1.6	0.05					
1N1219B	S			G	150	1.7	1.35	0.3	25				
1N1220	S	1N4003	1N4001	G	200	1.0	1.6	1.5	20				
1N1220A	S	1N4003	1N4001	G	200	1.5	1.6	0.05					
1N1220B	S			G	200	1.7	1.35	0.3	25				
1N1221	S	1N4004	1N4001	G	300	1.0	1.6	1.5	20				
1N1221A	S	1N4004	1N4001	G	300	1.5	1.6	0.05					
1N1221B	S			G	300	1.7	1.35	0.3	25				
1N1222	S	1N4004	1N4001	G	400	1.0	1.6	1.5	20				
1N1222A	S	1N4004	1N4001	G	400	1.5	1.6	0.05					
1N1222B	S			G	400	1.7	1.35	0.3	25				
1N1223	S	1N4005	1N4001	G	500	1.0	1.6	1.5	20				
1N1223A	S	1N4005	1N4001	G	500	1.5	1.6	0.05					
1N1223B	S			G	500	1.7	1.35	0.3	25				
1N1224	S	1N4005	1N4001	G	600	1.0	1.6	1.5	20				
1N1224A	S	1N4005	1N4001	G	600	1.5	1.6	0.05					

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N1224B	S			G	600	1.62	1.25	0.3	25				
1N1225	S	1N4006	1N4001	G	700	1.0	1.6	1.5	20				
1N1225A	S	1N4006	1N4001	G	700	1.55	1.1	0.5	25				
1N1225B	S			G	700	1.62	1.25	0.3	25				
1N1226	S	1N4006	1N4001	G	800	1.0	1.6	1.5	20				
1N1226A	S	1N4006	1N4001	G	800	1.50	1.1	0.5	25				
1N1226B	S			G	800	1.58	1.15	0.3	25				
1N1227	S			G	50	1.0	1.6	1.5	20				
1N1227A	S	MR1120	MR1120	G	50	1.5	1.6	0.05					
1N1228	S			G	100	1.0	1.6	1.5	20				
1N1228A	S	MR1121	MR1120	G	100	1.5	1.6	0.05					
1N1229	S			G	150	1.0	1.6	1.5	20				
1N1229A	S	MR1122	MR1120	G	150	1.5	1.6	0.05					
1N1230	S			G	200	1.0	1.6	1.5	20				
1N1230A	S	MR1122	MR1120	G	200	1.5	1.6	0.05					
1N1231	S			G	300	1.0	1.6	1.5	20				
1N1231A	S	MR1123	MR1120	G	300	1.5	1.6	0.05					
1N1232	S			G	400	1.0	1.6	1.5	20				
1N1232A	S	MR1124	MR1120	G	400	1.5	1.6	0.05					
1N1233	S			G	500	1.0	1.6	1.5	20				
1N1233A	S	MR1125	MR1120	G	500	1.5	1.6	0.05					
1N1234	S			G	600	1.0	1.6	1.5	20				
1N1234A	S	MR1126	MR1120	G	600	1.5	1.6	0.05					
1N1235	S			G	700	1.0	1.6	1.5	20				
1N1236	S			G	800	1.0	1.6	1.5	20				
1N1237	S			G	1600		0.75		8.0				
1N1238	S			G	1600		0.75		8.0				
1N1239	S			G	2800		0.5		5.0				
1N1240	S			G	50	1.0	0.25	0.5	5.0				
1N1241	S			G	100	1.0	0.25	0.5	5.0				
1N1242	S			G	200	1.0	0.25	0.5	5.0				
1N1243	S			G	300	1.0	0.2	0.5	5.0				
1N1244	S			G	400	1.0	0.15	0.5					
1N1244A	S			G	400	1.0	0.2	0.5	5.0				
1N1245	S			G	500	1.0	0.13	0.4					
1N1246	S			G	600	1.0	0.115	0.3					
1N1247	S			G	700	1.0	0.1	0.2					
1N1248	S			G	800	1.0	0.08	0.1					
1N1249	S			G	900	1.0	0.065	0.1					
1N1250	S			G	1000	1.0	0.05	0.1					
1N1251	S	1N4001	1N4001	G	50	1.0	0.5	0.5	5.0				
1N1252	S	1N4002	1N4001	G	100	1.0	0.5	0.5	5.0				
1N1253	S	1N4003	1N4001	G	200	1.0	0.5	0.5	5.0				
1N1254	S	1N4004	1N4001	G	300	1.0	0.5	0.5	5.0				
1N1255	S	1N4004	1N4001	G	400	1.0	0.5	0.5					
1N1255A	S	1N4004	1N4001	G	400	1.0	0.3	0.5	5.0				
1N1256	S	1N4005	1N4001	G	500	1.0	0.3	0.4					
1N1257	S	1N4005	1N4001	G	600	1.0	0.3	0.3					
1N1258	S	1N4006	1N4001	G	700	1.0	0.28	0.2					
1N1259	S	1N4006	1N4001	G	800	1.0	0.27	0.1					
1N1260	S	1N4007	1N4001	G	900	1.0	0.25	0.1					
1N1261	S	1N4007	1N4001	G	1000	1.0	0.24	0.1					
1N1262	S			G	4500		0.25		2.5				
1N1263	S			G	50		150		1500				
1N1263A	S			G	50		200		2000				
1N1264	S			G	100		150		1500				
1N1264A	S			G	100		200		2000				
1N1265	S			G	200		150		1500				
1N1265A	S			G	200		200		2000				
1N1266	S			G	300		150		1500				
1N1266A	S			G	300		200		2000				
1N1267	S			G	50		150		1500				
1N1267A	S			G	50		200		2000				
1N1268	S			G	100		150		1500				
1N1268A	S			G	100		200		2000				
1N1269	S			G	200		150		1500				
1N1269A	S			G	200		200		2000				
1N1270	S			G	300		150		1500				
1N1270A	S			G	300		200		2000				
1N1271	S			G	50		160	40					

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N1272	S			G	100		160	40					
1N1273	S			G	150		160	40					
1N1274	S			G	200		160	40					
1N1275	S			G	300		160	40					
1N1276	S			G	400		160	40					
1N1277	S			G	500		160	40					
1N1281	S			G	50		160	40					
1N1282	S			G	100		160	40					
1N1283	S			G	150		160	40					
1N1284	S			G	200		160	40					
1N1285	S			G	300		160	40					
1N1286	S			G	400		160	40					
1N1287	S			G	500		160	40					
1N1291	S			G	50		160	40					
1N1292	S			G	100		160	40					
1N1293	S			G	150		160	40					
1N1294	S			G	200		160	40					
1N1295	S			G	300		160	40					
1N1296	S			G	400		160	40					
1N1297	S			G	500		160	40					
1N1301	S	1N1183	1N1183	G	50	1.5	37	2.0	300				
1N1302	S	1N1184	1N1183	G	100	1.5	37	2.0	300				
1N1304	S	1N1186	1N1183	G	200	1.5	37	2.0	300				
1N1306	S	1N1187	1N1183	G	300	1.5	37	2.0	300				
★1N1313	S			Z						8.8	0.2	10	150m
★1N1313A	S			Z						8.8	0.2	5.0	150m
★1N1314	S			Z						10.5	0.2	10	150m
★1N1314A	S			Z						10.5	0.2	5.0	150m
★1N1315	S			Z						12.8	0.2	10	150m
★1N1315A	S			Z						12.8	0.2	5.0	150m
★1N1316	S			Z						15.8	0.2	10	150m
★1N1316A	S			Z						15.8	0.2	5.0	150m
★1N1317	S			Z						19	0.2	10	150m
★1N1317A	S			Z						19	0.2	5.0	150m
★1N1318	S			Z						23	0.2	10	150m
★1N1318A	S			Z						23	0.2	5.0	150m
★1N1319	S			Z						28	0.2	10	150m
★1N1319A	S			Z						28	0.2	5.0	150m
★1N1320	S			Z						34.5	0.2	10	150m
★1N1320A	S			Z						34.5	0.2	5.0	150m
★1N1321	S			Z						41	0.2	10	150m
★1N1321A	S			Z						41	0.2	5.0	150m
★1N1322	S			Z						48.5	0.2	10	150m
★1N1322A	S			Z						48.5	0.2	5.0	150m
★1N1323	S			Z						58	0.2	10	150m
★1N1323A	S			Z						58	0.2	5.0	150m
★1N1324	S			Z						71	0.2	10	150m
★1N1325	S			Z						89.5	0.2	10	150m
★1N1326	S			Z						105	0.2	10	150m
★1N1327	S			Z						127	0.2	10	150m
1N1329	S			G	1500	1.3	0.1	0.02	2.0				
1N1330	S			G	50		240	50					
1N1331	S			G	100		240	50					
1N1332	S			G	150		240	50					
1N1333	S			G	200		240	50					
1N1334	S			G	300		240	50					
1N1335	S			G	400		240	50					
1N1336	S			G	500		240	50					
1N1341	S			G	50	1.6	6.0	4.0	150				
1N1341A	S	MR1120	MR1120	G	50	1.4	6.0	3.0	150				
1N1341B	S			G	50	1.2	6.0	0.45	160				
1N1342	S			G	100	1.6	6.0	4.0	150				
1N1342A	S	MR1121	MR1120	G	100	1.4	6.0	2.5	150				
1N1342B	S			G	100	1.2	6.0	0.45	160				
1N1343	S			G	150	1.6	6.0	4.0	150				
1N1343A	S	MR1122	MR1120	G	150	1.4	6.0	2.25	150				
1N1343B	S			G	150	1.2	6.0	0.45	160				
1N1344	S			G	200	1.6	6.0	4.0	150				
1N1344A	S	MR1122	MR1120	G	200	1.4	6.0	2.0	150				
1N1344B	S			G	200	1.2	6.0	0.45	160				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N1345	S			G	300	1.6	6.0	4.0	150				
1N1345A	S	MR1123	MR1120	G	300	1.4	6.0	1.75	150				
1N1345B	S			G	300	1.2	6.0	0.45	160				
1N1346	S			G	400	1.6	6.0	4.0	150				
1N1346A	S	MR1124	MR1120	G	400	1.4	6.0	1.5	150				
1N1346B	S			G	400	1.2	6.0	0.45	160				
1N1347	S			G	500	1.6	6.0	4.0	150				
1N1347A	S	MR1125	MR1120	G	500	1.4	6.0	1.25	150				
1N1347B	S			G	500	1.2	6.0	0.45	160				
1N1348	S			G	600	1.6	6.0	4.0	150				
1N1348A	S	MR1126	MR1120	G	600	1.4	6.0	1.0	150				
1N1348B	S			G	600	1.2	6.0	0.45	160				
★1N1351	S	1N2974A	1N2970	G						10	500	10	10W
★1N1351A	S	1N2974B	1N2970	G						10	500	5.0	10W
★1N1352	S	1N2975A	1N2970	G						11	500	10	10W
★1N1352A	S	1N2975B	1N2970	G						11	500	5.0	10W
★1N1353	S	1N2976A	1N2970	G						12	500	10	10W
★1N1353A	S	1N2976B	1N2970	G						12	500	5.0	10W
★1N1354	S	1N2977A	1N2970	G						13	500	10	10W
★1N1354A	S	1N2977B	1N2970	G						13	500	5.0	10W
★1N1355	S	1N2979A	1N2970	G						15	500	10	10W
★1N1355A	S	1N2979B	1N2970	G						15	500	5.0	10W
★1N1356	S	1N2980A	1N2970	Z						16	500	10	10W
★1N1356A	S	1N2980B	1N2970	Z						16	500	5.0	10W
★1N1357	S	1N2982A	1N2970	Z						18	150	10	10W
★1N1357A	S	1N2982B	1N2970	Z						18	150	5.0	10W
★1N1358	S	1N2984A	1N2970	Z						20	150	10	10W
★1N1358A	S	1N2984B	1N2970	Z						20	150	5.0	10W
★1N1359	S	1N2985A	1N2970	Z						22	150	10	10W
★1N1359A	S	1N2985B	1N2970	Z						22	150	5.0	10W
★1N1360	S	1N2986A	1N2970	Z						24	150	10	10W
★1N1360A	S	1N2986B	1N2970	Z						24	150	5.0	10W
★1N1361	S	1N2988A	1N2970	Z						27	150	10	10W
★1N1361A	S	1N2988B	1N2970	Z						27	150	5.0	10W
★1N1362	S	1N2989A	1N2970	Z						30	150	10	10W
★1N1362A	S	1N2989B	1N2970	Z						30	150	5.0	10W
★1N1363	S	1N2990A	1N2970	Z						33	150	10	10W
★1N1363A	S	1N2990B	1N2970	Z						33	150	5.0	10W
★1N1364	S	1N2991A	1N2970	Z						36	150	10	10W
★1N1364A	S	1N2991B	1N2970	Z						36	150	5.0	10W
★1N1365	S	1N2992A	1N2970	Z						39	150	10	10W
★1N1365A	S	1N2992B	1N2970	Z						39	150	5.0	10W
★1N1366	S	1N2993A	1N2970	Z						43	150	10	10W
★1N1366A	S	1N2993B	1N2970	Z						43	150	5.0	10W
★1N1367	S	1N2995A	1N2970	Z						47	150	10	10W
★1N1367A	S	1N2995B	1N2970	Z						47	150	5.0	10W
★1N1368	S	1N2997A	1N2970	Z						51	150	10	10W
★1N1368A	S	1N2997B	1N2970	Z						51	150	5.0	10W
★1N1369	S	1N2999A	1N2970	Z						56	150	10	10W
★1N1369A	S	1N2999B	1N2970	Z						56	150	5.0	10W
★1N1370	S	1N3000A	1N2970	Z						62	50	10	10W
★1N1370A	S	1N3000B	1N2970	Z						62	50	5.0	10W
★1N1371	S	1N3001A	1N2970	Z						68	50	10	10W
★1N1371A	S	1N3001B	1N2970	Z						68	50	5.0	10W
★1N1372	S	1N3002A	1N2970	Z						75	50	10	10W
★1N1372A	S	1N3002B	1N2970	Z						75	50	5.0	10W
★1N1373	S	1N3003A	1N2970	Z						82	50	10	10W
★1N1373A	S	1N3003B	1N2970	Z						82	50	5.0	10W
★1N1374	S	1N3004A	1N2970	Z						91	50	10	10W
★1N1374A	S	1N3004B	1N2970	Z						91	50	5.0	10W
★1N1375	S	1N3005A	1N2970	Z						100	50	10	10W
★1N1375A	S	1N3005B	1N2970	Z						100	50	5.0	10W
1N1376	S			G	50		240	50					
1N1377	S			G	100		240	50					
1N1378	S			G	150		240	50					
1N1379	S			G	200		240	50					
1N1380	S			G	300		240	50					
1N1381	S			G	400		240	50					
1N1382	S			G	500		240	50					
1N1396	S	MR1810SB	MR1210	G	50	1.55	70	15	1200				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N1397	S	MR1811SB	MR1210	G	100	1.55	70	15	1200				
1N1398	S	MR1812SB	MR1210	G	150	1.55	70	15	1200				
1N1399	S	MR1813SB	MR1210	G	200	1.55	70	15	1200				
1N1400	S	MR1815SB	MR1210	G	300	1.55	70	15	1200				
1N1401	S	MR1817SB	MR1210	G	400	1.55	70	15	1200				
1N1402	S	MR1818SB	MR1210	G	500	1.55	70	15	1200				
1N1403	S	MR1819SB	MR1210	G	600	1.55	70	15	1200				
1N1406	S	1N4005	1N4001	G	600	5.0	0.1	0.1	3.5				
1N1407	S	1N4006	1N4001	G	800	5.0	1.0	0.1	3.5				
1N1408	S	1N4007	1N4001	G	1000	5.0	1.0	0.1	3.5				
1N1409	S	MR991A	MR990A	G	1200	5.0	0.1	0.1	3.5				
1N1410	S	MR991A	MR990A	G	1500	6.25	0.1	0.1	3.5				
1N1411	S	MR992A	MR990A	G	1800	7.5	0.1	0.1	3.5				
1N1412	S	MR992A	MR990A	G	2000	6.25	0.1	0.1	3.5				
1N1413	S	MR993A	MR990A	G	2400	7.5	0.1	0.1	3.5				
1N1414	S			G	400	1.25	10	1.0	100				
1N1415	S			S		1.1	1.0	1.0*					
1N1416	S	1N2972B	1N2970	Z						8.2	200	5.0	10W
1N1417	S	1N2976B	1N2970	Z						12	200	5.0	10W
1N1418	S	1N2979B	1N2970	Z						15	100	5.0	10W
1N1419	S	1N2982B	1N2970	Z						18	100	5.0	10W
1N1420	S	1N2985B	1N2970	Z						22	100	5.0	10W
1N1421	S	1N2988B	1N2970	Z						27	50	5.0	10W
1N1422	S	1N3001B	1N2970	Z						68	20	5.0	10W
1N1423	S	1N3005B	1N2970	Z						100	20	5.0	10W
1N1424	S	1N3011B	1N2970	Z						150	10	5.0	10W
1N1425	S	1N4738A	1N2970	Z						8.2	20	5.0	1.0W
1N1426	S	1N4742A	1N2970	Z						12	20	5.0	1.0W
1N1427	S	1N4744A	1N2970	Z						15	10	5.0	1.0W
1N1428	S	1N4746A	1N2970	Z						18	10	5.0	1.0W
1N1429	S	1N4748A	1N2970	Z						22	10	5.0	1.0W
1N1430	S	1N4750A	1N2070	Z						27	5.0	5.0	1.0W
1N1431	S	1N4760A	1N2070	Z						68	2.0	5.0	1.0W
1N1432	S	1N4764A	1N2070	Z						100	2.0	5.0	1.0W
1N1433	S	1M150ZS5		Z						150	1.0	5.0	10W
1N1434	S	1N1183	1N1183	G	50	1.2	30	5.0					
1N1435	S	1N1184	1N1183	G	100	1.2	30	5.0					
1N1436	S	1N1186	1N1183	G	200	1.2	30	5.0					
1N1437	S	1N1188	1N1183	G	400	1.2	30	5.0					
1N1438	S	1N1190	1N1183	G	600	1.2	30	5.0					
1N1440	S	1N4003	1N4001	G	200	1.2	0.75	0.5	30				
1N1441	S	1N4004	1N4001	G	300	1.2	0.75	0.5	30				
1N1442	S	1N4004	1N4001	G	400	1.2	0.75	0.5	30				
1N1443	S	1N4007	1N4001	G	1000	1.0	1.6	1.5	20				
1N1443A	S			G	1000	1.45	1.1	0.5	25				
1N1443B	S			G	1000	1.55	1.1	0.3	25				
1N1444	S	MR1130	MR1120	G	1000	1.0	1.6	1.5	20				
1N1445	S			G	360	2.0	0.2	4.0					
1N1446	S			G	100	2.0		2.0					
1N1447	S			G	200	2.0		2.0					
1N1448	S			G	300	1.4		2.0					
1N1449	S			G	400	2.0		2.0					
1N1450	S			G	100	1.4		5.0					
1N1451	S			G	200	1.4		5.0					
1N1452	S			G	300	1.4		5.0					
1N1453	S			G	400	1.4		5.0					
1N1454	S			G	100	1.5	25	25					
1N1455	S			G	200	1.5	25	25					
1N1456	S			G	300	1.5	25	25					
1N1457	S			G	400	1.5	25	25					
1M1458	S			G	100	1.5	35	25					
1N1459	S			G	200	1.5	35	25					
1N1460	S			G	300	1.5	35	25					
1N1461	S			G	400	1.5	35	25					
1N1462	S			G	100	1.5	50	50					
1N1463	S			G	200	1.5	50	50					
1N1464	S			G	300	1.5	50	50					
1N1465	S			G	400	1.5	50	50					
1N1466	S	MR1221FB	MR1220	G	100	1.5	75	50					
1N1467	S	MR1223FB	MR1220	G	200	1.5	75	50					

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N1468	S	MR1225FB	MR1220	G	300	1.5	75	50					
1N1469	S	MR1227FB	MR1220	G	400	1.5	75	50					
1N1470	S			G	100	1.5	100	100					
1N1471	S			G	200	1.5	100	100					
1N1472	S			G	300	1.5	100	100					
1N1473	S			G	400	1.5	100	100					
1N1474	S			G	100	1.5	150	100					
1N1475	S			G	200	1.5	150	100					
1N1476	S			G	300	1.5	150	100					
1N1477	S			G	400	1.5	150	100					
1N1478	S	MR1241FB	MR1240	G	100	1.5	200	100					
1N1479	S	MR1243FB	MR1240	G	200	1.5	200	100					
1N1480	S	MR1245FB	MR1240	G	300	1.5	200	100					
1N1481	S	MR1247FB	MR1240	G	400	1.5	200	100					
1N1482	S	1N3995A	1N3993	Z						4.7	200	5.0	10W
1N1483	S	1N3998A	1N3993	Z						6.2	200	5.0	10W
1N1484	S	1N4732A	1N4728	Z						4.7	50	5.0	1.0W
1N1485	S	1N4735A	1N4728	Z						6.2	20	5.0	1.0W
1N1486	S	1N4005	1N4001	G	500		0.5	3.5					
1N1487	S	1N4002	1N4001	G	100	0.55	0.25	0.4	15				
1N1488	S	1N4003	1N4001	G	200	0.55	0.25	0.3	15				
1N1489	S	1N4004	1N4001	G	300	0.55	0.25	0.3	15				
1N1490	S	1N4004	1N4001	G	400	0.55	0.25	0.3	15				
1N1491	S	1N4005	1N4001	G	500	0.55		0.3	15				
1N1492	S	1N4005	1N4001	G	600	0.55		0.3	15				
★1N1507	S	1N4730	1N4728	Z						3.9	35	10	750m
★1N1507A	S	1N4730A	1N4728	Z						3.9	35	5.0	750m
★1N1508	S	1N4732	1N4728	Z						4.7	30	10	750m
★1N1508A	S	1N4732A	1N4728	Z						4.7	30	5.0	750m
★1N1509	S	1N4734	1N4728	Z						5.6	25	10	750m
★1N1509A	S	1N4734A	1N4728	Z						5.6	25	5.0	750m
★1N1510	S	1N4736	1N4728	Z						6.8	22	10	750m
★1N1510A	S	1N4736A	1N4728	Z						6.8	22	5.0	750m
★1N1511	S	1N4738	1N4728	Z						8.2	18	10	750m
★1N1511A	S	1N4738A	1N4728	Z						8.2	18	5.0	750m
★1N1512	S	1N4740	1N4728	Z						10	15	10	750m
★1N1512A	S	1N4740A	1N4728	Z						10	15	5.0	750m
★1N1513	S	1N4742	1N4728	Z						12	12	10	750m
★1N1513A	S	1N4742A	1N4728	Z						12	12	5.0	750m
★1N1514	S	1N4744	1N4728	Z						15	10	10	750m
★1N1514A	S	1N4744A	1N4728	Z						15	10	5.0	750m
★1N1515	S	1N4746	1N4728	Z						18	8.0	10	750m
★1N1515A	S	1N4746A	1N4728	Z						18	8.0	5.0	750m
★1N1516	S	1N4748	1N4728	Z						22	6.0	10	750m
★1N1516A	S	1N4748A	1N4728	Z						22	6.0	5.0	750m
★1N1517	S	1N4750	1N4728	Z						27	5.0	10	750m
★1N1517A	S	1N4750A	1N4728	Z						27	5.0	5.0	750m
★1N1518	S	1N4730	1N4728	Z						3.9	50	10	1.0W
★1N1518A	S	1N4730A	1N4728	Z						3.9	50	5.0	1.0W
★1N1519	S	1N4732	1N4728	Z						4.7	40	10	1.0W
★1N1519A	S	1N4732A	1N4728	Z						4.7	40	5.0	1.0W
★1N1520	S	1N4734	1N4728	Z						5.6	35	10	1.0W
★1N1520A	S	1N4734A	1N4728	Z						5.6	35	5.0	1.0W
★1N1521	S	1N4736	1N4728	Z						6.8	30	10	1.0W
★1N1521A	S	1N4736A	1N4728	Z						6.8	30	5.0	1.0W
★1N1522	S	1N4738	1N4728	Z						8.2	25	10	1.0W
★1N1522A	S	1N4738A	1N4728	Z						8.2	25	5.0	1.0W
★1N1523	S	1N4740	1N4728	Z						10	20	10	1.0W
★1N1523A	S	1N4740A	1N4728	Z						10	20	5.0	1.0W
★1N1524	S	1N4742	1N4728	Z						12	15	10	1.0W
★1N1524A	S	1N4742A	1N4728	Z						12	15	5.0	1.0W
★1N1525	S	1N4744	1N4728	Z						15	13	10	1.0W
★1N1525A	S	1N4744A	1N4728	Z						15	13	5.0	1.0W
★1N1526	S	1N4746	1N4728	Z						18	10	10	1.0W
★1N1526A	S	1N4746A	1N4728	Z						18	10	5.0	1.0W
★1N1527	S	1N4748	1N4728	Z						22	9.0	10	1.0W
★1N1527A	S	1N4748A	1N4728	Z						22	9.0	5.0	1.0W
★1N1528	S	1N4750	1N4728	Z						27	7.0	10	1.0W
★1N1528A	S	1N4750A	1N4728	Z						27	7.0	5.0	1.0W
★1N1530	S	1N3156	1N3154	R						8.4	0.002	10	-55/100

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N1530A	S	1N3157	1N3154	G						8.4	0.002	10	-55/100
1N1537	S	MR1120	MR1120	G	50	1.5	1.6	0.05					
1N1538	S	MR1121	MR1120	G	100	1.5	1.6	0.05					
1N1539	S	MR1122	MR1120	G	150	1.5	1.6	0.05					
1N1540	S	MR1122	MR1120	G	200	1.5	1.6	0.05					
1N1541	S	MR1123	MR1120	G	300	1.5	1.6	0.05					
1N1542	S	MR1124	MR1120	G	400	1.5	1.6	0.05					
1N1543	S	MR1125	MR1120	G	500	1.5	1.6	0.05					
1N1544	S	MR1126	MR1120	G	600	1.5	1.6	0.05					
1N1551	S	MR1121	MR1120	G	100	1.4		1.0					
1N1552	S	MR1122	MR1120	G	200	1.4		1.0					
1N1553	S	MR1123	MR1120	G	300	1.4		1.0					
1N1554	S	MR1124	MR1120	G	400	1.4		1.0					
1N1555	S	MR1125	MR1120	G	500	1.4		1.0					
1N1556	S	1N4002	1N4001	G	100	1.4	0.75	1.0					
1N1557	S	1N4003	1N4001	G	200	1.4	0.75	1.0					
1N1558	S	1N4004	1N4001	G	300	1.4	0.75	1.0					
1N1559	S	1N4004	1N4001	G	400	1.4	0.75	1.0					
1N1560	S	1N4005	1N4001	G	500	1.4	0.75	1.0					
1N1561	G			S	25	0.4	12m	25*					
1N1562	G			S	25	0.4	8.0m	25*					
1N1563	S			G	100	1.5	1.0	0.003	70				
1N1563A	S			G	100	1.5	1.5	0.003	70				
1N1564	S			G	200	1.5	1.0	0.003	70				
1N1564A	S			G	200	1.5	1.5	0.003	70				
1N1565	S			G	300	1.5	1.0	0.003	70				
1N1565A	S			G	300	1.5	1.5	0.003	70				
1N1566	S			G	400	1.5	1.0	0.003	70				
1N1566A	S			G	400	1.5	1.5	0.003	70				
1N1567	S			G	500	1.2	1.0	0.005	70				
1N1567A	S			G	500	1.5	1.5	0.003	70				
1N1568	S			G	600	1.2	1.0	0.005	70				
1N1568A	S			G	600	1.5	1.5	0.003	70				
1N1569	S			G	100	1.5	1.0	0.005	70				
1N1570	S			G	200	1.5	1.0	0.005	70				
1N1571	S			G	300	1.5	1.0	0.005	70				
1N1572	S			G	400	1.5	1.0	0.005	70				
1N1573	S			G	500	1.5	1.0	0.005	70				
1N1574	S			G	600	1.5	1.0	0.005	70				
1N1575	S			G	100	1.5	3.5	0.005	70				
1N1576	S			G	200	1.5	3.5	0.005	70				
1N1577	S			G	300	1.5	3.5	0.005	70				
1N1578	S			G	400	1.5	3.5	0.005	70				
1N1579	S			G	500	1.5	3.5	0.005	70				
1N1580	S			G	600	1.5	3.5	0.005	70				
1N1581	S	MR1120	MR1120	G	50	1.5	3.0	5.0	40				
1N1582	S	MR1121	MR1120	G	100	1.5	3.0	5.0	40				
1N1583	S	MR1122	MR1120	G	200	1.5	3.0	5.0	40				
1N1584	S	MR1123	MR1120	G	300	1.5	3.0	5.0	40				
1N1585	S	MR1124	MR1120	G	400	1.5	3.0	5.0	40				
1N1586	S	MR1125	MR1120	G	500	1.5	3.0	5.0	40				
1N1587	S	MR1126	MR1120	G	600	1.5	3.0	5.0	40				
★1N1588	S	1N3993	1N3993	Z						3.9	150	10	3.5W
★1N1588A	S	1N3993A	1N3993	Z						3.9	150	5.0	3.5W
★1N1589	S	1N3995	1N3993	Z						4.7	125	10	3.5W
★1N1589A	S	1N3995A	1N3993	Z						4.7	125	5.0	3.5W
★1N1590	S	1N3997	1N3993	Z						5.6	110	10	3.5W
★1N1590A	S	1N3997A	1N3993	Z						5.6	110	5.0	3.5W
★1N1591	S	1N2970RA	1N2970	Z						6.8	100	10	3.5W
★1N1591A	S	1N2970RB	1N2970	Z						6.8	100	5.0	3.5W
★1N1592	S	1N2972RA	1N2970	Z						8.2	80	10	3.5W
★1N1592A	S	1N2972RB	1N2970	Z						8.2	80	5.0	3.5W
★1N1593	S	1N2974RA	1N2970	Z						10	70	10	3.5W
★1N1593A	S	1N2974RB	1N2970	Z						10	70	5.0	3.5W
★1N1594	S	1N2976RA	1N2970	Z						12	50	10	3.5W
★1N1594A	S	1N2976RB	1N2970	Z						12	50	5.0	3.5W
★1N1595	S	1N2979RA	1N2970	Z						15	40	10	3.5W
★1N1595A	S	1N2979RB	1N2970	Z						15	40	5.0	3.5W
★1N1596	S	1N2982RA	1N2970	Z						18	35	10	3.5W
★1N1596A	S	1N2982RB	1N2970	Z						18	35	5.0	3.5W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N1597	S	1N2985RA	1N2970	Z						22	30	10	3.5W
★1N1597A	S	1N2985RB	1N2970	Z						22	30	5.0	3.5W
★1N1598	S	1N2988RA	1N2970	Z						27	25	10	3.5W
★1N1598A	S	1N2988RB	1N2970	Z						27	25	5.0	3.5W
★1N1599	S	1N3993	1N3993	Z						3.9	500	10	10W
★1N1599A	S	1N3993A	1N3993	Z						3.9	500	5.0	10W
★1N1600	S	1N3995	1N3993	Z						4.7	400	10	10W
★1N1600A	S	1N3995A	1N3993	Z						4.7	400	5.0	10W
★1N1601	S	1N3997	1N3993	Z						5.6	350	10	10W
★1N1601A	S	1N3997A	1N3993	Z						5.6	350	5.0	10W
★1N1602	S	1N2970RA	1N2970	Z						6.8	300	10	10W
★1N1602A	S	1N2970RB	1N2970	Z						6.8	300	5.0	10W
★1N1603	S	1N2972RA	1N2970	Z						8.2	250	10	10W
★1N1603A	S	1N2972RB	1N2970	Z						8.2	250	5.0	10W
★1N1604	S	1N2974RA	1N2970	Z						10	200	10	10W
★1N1604A	S	1N2974RB	1N2970	Z						10	200	5.0	10W
★1N1605	S	1N2976RA	1N2970	Z						12	170	10	10W
★1N1605A	S	1N2976RB	1N2970	Z						12	170	5.0	10W
★1N1606	S	1N2979RA	1N2970	Z						15	140	10	10W
★1N1606A	S	1N2979RB	1N2970	Z						15	140	5.0	10W
★1N1607	S	1N2982RA	1N2970	Z						18	110	10	10W
★1N1607A	S	1N2982RB	1N2970	Z						18	110	5.0	10W
★1N1608	S	1N2985RA	1N2970	Z						22	90	10	10W
★1N1608A	S	1N2985RB	1N2970	Z						22	90	5.0	10W
★1N1609	S	1N2988RA	1N2970	Z						27	70	10	10W
★1N1609A	S	1N2988RB	1N2970	Z						27	70	5.0	10W
1N1610	S		Table 4	M									
1N1611	S		Table 4	M									
1N1611A	S		Table 4	M									
1N1611B	S		Table 4	M									
1N1612	S	MR1120	MR1120	G	50	1.5	5.0	1.0					
1N1613	S	MR1121	MR1120	G	100	1.5	5.0	1.0					
1N1614	S	MR1122	MR1120	G	200	1.5	5.0	1.0					
1N1615	S	MR1124	MR1120	G	400	1.5	5.0	1.0					
1N1616	S	MR1126	MR1120	G	600	1.5	5.0	1.0					
1N1617	S	1N4002	1N4001	G	100	1.2	1.5		60				
1N1618	S	1N4003	1N4001	G	200	1.2	1.5		60				
1N1619	S	1N4004	1N4001	G	300	1.2	1.5		60				
1N1620	S	1N4004	1N4001	G	400	1.2	1.5		60				
1N1621	S	MR1121	MR1120	G	100	1.2	10		80				
1N1622	S	MR1122	MR1120	G	200	1.2	10		80				
1N1623	S	MR1123	MR1120	G	300	1.2	10		80				
1N1624	S	MR1124	MR1120	G	400	1.2	10		80				
1N1625	E			G	48	1.0		0.015	0.005				
1N1625A	E			G	48	1.0		0.015	0.01				
1N1626	E			G	96	2.0		0.015	0.005				
1N1626A	E			G	96	2.0		0.015	0.01				
1N1627	E			G	48	1.0	0.003	0.027	0.08				
1N1628	E			G	96	2.0	0.003	0.027	0.08				
1N1629	E			G	144	3.0	0.003	0.027	0.08				
1N1630	E			G	192	4.0	0.003	0.027	0.08				
1N1631	E			G	240	5.0	0.003	0.027	0.08				
1N1632	E			G	288	6.0	0.003	0.027	0.08				
1N1633	E			G	336	7.0	0.003	0.027	0.08				
1N1634	E			G	384	8.0	0.003	0.027	0.08				
1N1635	E			G	48	1.0	0.013	0.108	0.25				
1N1636	E			G	96	2.0	0.013	0.108	0.25				
1N1637	E			G	144	3.0	0.013	0.108	0.25				
1N1638	E			G	192	4.0	0.013	0.108	0.25				
1N1639	E			G	240	5.0	0.013	0.108	0.25				
1N1640	E			G	48	1.0	0.028	0.240	0.55				
1N1641	E			G	96	2.0	0.028	0.240	0.55				
1N1642	E			G	144	3.0	0.028	0.240	0.55				
1N1644	S	1N4001	1N4001	G	50	0.5	0.75	0.4	15				
1N1645	S	1N4002	1N4001	G	100	0.5	0.75	0.4	15				
1N1646	S	1N4003	1N4001	G	150	0.5	0.75	0.3	15				
1N1647	S	1N4003	1N4001	G	200	0.5	0.75	0.3	15				
1N1648	S	1N4004	1N4001	G	250	0.5	0.75	0.3	15				
1N1649	S	1N4004	1N4001	G	300	0.5	0.75	0.3	15				
1N1650	S	1N4004	1N4001	G	350	0.5	0.75	0.3	15				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N1651	S	1N4004	1N4001	G	400	0.5	0.25	0.3	15				
1N1652	S	1N4005	1N4001	G	500	0.5	0.25	0.3	15				
1N1653	S	1N4005	1N4001	G	600	0.5	0.25	0.3	15				
1N1660	S	MR1220SB	MR1220SB	G	50		160	40					
1N1661	S	MR1221SB	MR1220	G	100		160	40					
1N1662	S	MR1222SB	MR1220	G	150		160	40					
1N1663	S	MR1223SB	MR1220	G	200		160	40					
1N1664	S	MR1225SB	MR1220	G	300		160	40					
1N1665	S	MR1227SB	MR1220	G	400		160	40					
1N1666	S	MR1228SB	MR1220	G	500		160	40					
1N1670	S			G	50		240	50					
1N1671	S			G	100		240	50					
1N1672	S			G	150		240	50					
1N1673	S			G	200		240	50					
1N1674	S			G	300		240	50					
1N1675	S			G	400		240	50					
1N1676	S			G	500		240	50					
1N1680	S			G	150	1.1	50	25	700				
1N1681	S			G	250	1.1	50	25	700				
1N1682	S			G	300	1.1	50	25	700				
1N1683	S			G	350	1.1	50	25	700				
1N1684	S			G	400	1.1	50	25	700				
1N1685	S			G	450	1.1	50	25	700				
1N1686	S			G	500	1.1	50	25	700				
1N1687	S			G	600	1.1	50	25	700				
1N1688	S			G	700	1.1	50	25	700				
1N1689	S			G	800	1.1	50	25	700				
1N1690	S			G	900	1.1	50	25	700				
1N1691	S			G	1000	1.1	50	25	700				
1N1692	S	1N4002	1N4001	G	100	0.6	0.25	0.5	20				
1N1693	S	1N4003	1N4001	G	200	0.6	0.25	0.5	20				
1N1694	S	1N4004	1N4001	G	300	0.6	0.25	0.5	20				
1N1695	S	1N4004	1N4001	G	400	0.6	0.25	0.5	20				
1N1696	S	1N4005	1N4001	G	500	0.6		0.5	20				
1N1697	S	1N4005	1N4001	G	600	0.6		0.5	20				
1N1698	S			G	6600	33	0.062						
1N1699	S			G	10k	37	0.058						
1N1700	S			G	12k	45	0.05						
1N1701	S	1N4001	1N4001	G	50	1.3	0.3	0.2	8.0				
1N1702	S	1N4002	1N4001	G	100	1.3	0.3	0.2	8.0				
1N1703	S	1N4003	1N4001	G	200	1.3	0.3	0.2	8.0				
1N1704	S	1N4004	1N4001	G	300	1.3	0.3	0.2	8.0				
1N1705	S	1N4004	1N4001	G	400	1.3	0.3	0.2	8.0				
1N1706	S	1N4005	1N4001	G	500	1.3	0.3	0.2	8.0				
1N1707	S	1N4001	1N4001	G	50	1.15	0.5	0.2	10				
1N1708	S	1N4002	1N4001	G	100	1.15	0.5	0.2	10				
1N1709	S	1N4003	1N4001	G	200	1.15	0.5	0.2	10				
1N1710	S	1N4004	1N4001	G	300	1.15	0.5	0.2	10				
1N1711	S	1N4004	1N4001	G	400	1.15	0.5	0.2	10				
1N1712	S	1N4005	1N4001	G	500	1.15	0.5	0.2	10				
1N1730	S	1N4007	1N4001	G	1000	5.0		0.1	2.5				
1N1730A	S			G	1000		0.35		6.0				
1N1731	S	MR991A	MR990A	G	1500	5.0		0.1	2.5				
1N1731A	S			G	1500		0.35		6.0				
1N1732	S	MR992A	MR990A	G	2000	9.0		0.1	2.5				
1N1732A	S			G	2000		0.35		6.0				
1N1733	S	MR994A	MR990A	G	3000	12		0.1	2.5				
1N1733A	S			G	3000		0.35		6.0				
1N1734	S	MR996A	MR990A	G	5000	18		0.1	2.5				
1N1734A	S			G	5000		0.35		6.0				
★1N1735	S	1N821	1N821	R						6.2	0.8	7.5	-55/150
★1N1736	S	1N941A	1N941	R						12.4	0.8	7.5	-55/150
★1N1736A	S	1N942A	1N941	R						12.4	0.4	7.5	-55/150
★1N1737	S	1N4060	1N429	R						18.6	0.8	7.5	-55/150
★1N1737A	S	1N4060A	1N429	R						18.6	0.4	7.5	-55/150
★1N1738	S	1N4062	1N429	R						24.8	0.8	7.5	-55/150
★1N1738A	S	1N4062A	1N429	R						24.8	0.4	7.5	-55/150
★1N1739	S	1N4064	1N429	R						31	0.8	7.5	-55/150
★1N1739A	S	1N4064A	1N429	R						31	0.4	7.5	-55/150
★1N1740	S	1N4066	1N429	R						37.2	0.8	7.5	-55/150

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N1740A	S	1N4066A	1N429	R						37.2	0.4	7.5	-55/150
★1N1741	S	1N4067	1N429	R						43.4	0.8	7.5	-55/150
★1N1741A	S	1N4067A	1N429	R						43.4	0.4	7.5	-55/150
★1N1742	S	1N4069	1N429	R						49.6	0.8	7.5	-55/150
★1N1742A	S	1N4069A	1N429	R						49.6	0.4	7.5	-55/150
1N1743	S	1N2974A	1N2970	Z						10	250	10	10W
1N1744	S	1N4740	1N4728	Z						10	25	10	1.0W
1N1745	S			G	1500	15	0.32	0.2	3.5				
1N1746	S			G	1500	7.5	0.5	0.2	3.5				
1N1747	S			G	1800	18	0.31	0.2	3.5				
1N1748	S			G	1800	9.0	0.38	0.2	3.5				
1N1749	S			G	2400	24	0.37	0.2	3.5				
1N1750	S			G	2400	12	0.32	0.2	3.5				
1N1751	S			G	3600	27	0.42	0.2	3.5				
1N1752	S			G	3600	18	0.41	0.2	3.5				
1N1753	S			G	4800	36	0.38	0.2	3.5				
1N1754	S			G	4800	24	0.37	0.2	3.5				
1N1755	S			G	6000	45	0.33	0.2	3.5				
1N1756	S			G	6000	30	0.41	0.2	3.5				
1N1757	S			G	7200	54	0.33	0.2	3.5				
1N1758	S			G	7200	36	0.38	0.2	3.5				
1N1759	S			G	8000	60	0.29	0.2	3.5				
1N1760	S			G	12k	60	0.29	0.2	3.5				
1N1761	S			G	14k	52	0.34	0.2	3.5				
1N1762	S			G	16k	60	0.29	0.2	3.5				
1N1763	S	1N4004	1N4001	G	400	3.0	0.5	0.1	35				
1N1763A	S			G	400	1.2	1.0	0.5	25				
1N1764	S	1N4005	1N4001	G	500	3.0	0.5	0.1	35				
1N1764A	S			G	500	1.2	1.0	0.5	25				
★1N1765	S	1N4734	1N4728	Z						5.6	100	10	1.0W
★1N1765A	S	1N4734A	1N4728	Z						5.6	100	5.0	1.0W
★1N1766	S	1N4735	1N4728	Z						6.2	100	10	1.0W
★1N1766A	S	1N4735A	1N4728	Z						6.2	100	5.0	1.0W
★1N1767	S	1N4736	1N4728	Z						6.8	100	10	1.0W
★1N1767A	S	1N4736A	1N4728	Z						6.8	100	5.0	1.0W
★1N1768	S	1N4737	1N4728	Z						7.5	100	10	1.0W
★1N1768A	S	1N4737A	1N4728	Z						7.5	100	5.0	1.0W
★1N1769	S	1N4738	1N4728	Z						8.2	100	10	1.0W
★1N1769A	S	1N4738A	1N4728	Z						8.2	100	5.0	1.0W
★1N1770	S	1N4739	1N4728	Z						9.1	50	10	1.0W
★1N1770A	S	1N4739A	1N4728	Z						9.1	50	5.0	1.0W
★1N1771	S	1N4740	1N4728	Z						10	50	10	1.0W
★1N1771A	S	1N4740A	1N4728	Z						10	50	5.0	1.0W
★1N1772	S	1N4741	1N4728	Z						11	50	10	1.0W
★1N1772A	S	1N4741A	1N4728	Z						11	50	5.0	1.0W
★1N1773	S	1N4742	1N4728	Z						12	50	10	1.0W
★1N1773A	S	1N4742A	1N4728	Z						12	50	5.0	1.0W
★1N1774	S	1N4743	1N4728	Z						13	50	10	1.0W
★1N1774A	S	1N4743A	1N4728	Z						13	50	5.0	1.0W
★1N1775	S	1N4744	1N4728	Z						15	50	10	1.0W
★1N1775A	S	1N4744A	1N4728	Z						15	50	5.0	1.0W
★1N1776	S	1N4745	1N4728	Z						16	50	10	1.0W
★1N1776A	S	1N4745A	1N4728	Z						16	50	5.0	1.0W
★1N1777	S	1N4746	1N4728	Z						18	50	10	1.0W
★1N1777A	S	1N4746A	1N4728	Z						18	50	5.0	1.0W
★1N1778	S	1N4747	1N4728	Z						20	15	10	1.0W
★1N1778A	S	1N4747A	1N4728	Z						20	15	5.0	1.0W
★1N1779	S	1N4748	1N4728	Z						22	15	10	1.0W
★1N1779A	S	1N4748A	1N4728	Z						22	15	5.0	1.0W
★1N1780	S	1N4749	1N4728	Z						24	15	10	1.0W
★1N1780A	S	1N4749A	1N4728	Z						24	15	5.0	1.0W
★1N1781	S	1N4750	1N4728	Z						27	15	10	1.0W
★1N1781A	S	1N4750A	1N4728	Z						27	15	5.0	1.0W
★1N1782	S	1N4751	1N4728	Z						30	15	10	1.0W
★1N1782A	S	1N4751A	1N4728	Z						30	15	5.0	1.0W
★1N1783	S	1N4752	1N4728	Z						33	15	10	1.0W
★1N1783A	S	1N4752A	1N4728	Z						33	15	5.0	1.0W
★1N1784	S	1N4753	1N4728	Z						36	15	10	1.0W
★1N1784A	S	1N4753A	1N4728	Z						36	15	5.0	1.0W
★1N1785	S	1N4754	1N4728	Z						39	15	10	1.0W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N1785A	S	1N4754A	1N4728	Z						39	15	5.0	1.0W
★1N1786	S	1N4755	1N4728	Z						43	15	10	1.0W
★1N1786A	S	1N4755A	1N4728	Z						43	15	5.0	1.0W
★1N1787	S	1N4756	1N4728	Z						47	15	10	1.0W
★1N1787A	S	1N4756A	1N4728	Z						47	15	5.0	1.0W
★1N1788	S	1N4757	1N4728	Z						51	15	10	1.0W
★1N1788A	S	1N4757A	1N4728	Z						51	15	5.0	1.0W
★1N1789	S	1N4758	1N4728	Z						56	15	10	1.0W
★1N1789A	S	1N4758A	1N4728	Z						56	15	5.0	1.0W
★1N1790	S	1N4759	1N4728	Z						62	5.0	10	1.0W
★1N1790A	S	1N4759A	1N4728	Z						62	5.0	5.0	1.0W
★1N1791	S	1N4760	1N4728	Z						68	5.0	10	1.0W
★1N1791A	S	1N4760A	1N4728	Z						68	5.0	5.0	1.0W
★1N1792	S	1N4761	1N4728	Z						75	5.0	10	1.0W
★1N1792A	S	1N4761A	1N4728	Z						75	5.0	5.0	1.0W
★1N1793	S	1N4762	1N4728	Z						82	5.0	10	1.0W
★1N1793A	S	1N4762A	1N4728	Z						82	5.0	5.0	1.0W
★1N1794	S	1N4763	1N4728	Z						91	5.0	10	1.0W
★1N1794A	S	1N4763A	1N4728	Z						91	5.0	5.0	1.0W
★1N1795	S	1N4764	1N4728	Z						100	5.0	10	1.0W
★1N1795A	S	1N4764A	1N4728	Z						100	5.0	5.0	1.0W
★1N1796	S	1M110ZS1C	1N4728	Z						110	5.0	10	1.0W
★1N1796A	S	1M110ZS5	1N4728	Z						110	5.0	5.0	1.0W
★1N1797	S	1M120ZS10	1N4728	Z						120	5.0	10	1.0W
★1N1797A	S	1M120ZS5	1N4728	Z						120	5.0	5.0	1.0W
★1N1798	S	1M130ZS10	1N4728	Z						130	5.0	10	1.0W
★1N1798A	S	1M130ZS5	1N4728	Z						130	5.0	5.0	1.0W
★1N1799	S	1M150ZS10	1N4728	Z						150	5.0	10	1.0W
★1N1799A	S	1M150ZS5	1N4728	Z						150	5.0	5.0	1.0W
★1N1800	S	1M160ZS10	1N4728	Z						160	5.0	10	1.0W
★1N1800A	S	1M160ZS5	1N4728	Z						160	5.0	5.0	1.0W
★1N1801	S	1M180ZS10	1N4728	Z						180	5.0	10	1.0W
★1N1801A	S	1M180ZS5	1N4728	Z						180	5.0	5.0	1.0W
★1N1802	S	1M200ZS10	1N4728	Z						200	5.0	10	1.0W
★1N1802A	S	1M200ZS5	1N4728	Z						200	5.0	5.0	1.0W
★1N1803	S	1N3997R	1N3993	Z						5.6	5.0	10	10W
★1N1803A	S	1N3997RA	1N3993	Z						5.6	1000	5.0	10W
★1N1804	S	1N3998R	1N3993	Z						6.2	1000	10	10W
★1N1804A	S	1N3998RA	1N3993	Z						6.2	1000	5.0	10W
★1N1805	S	1N2970A	1N2970	Z						6.8	1000	10	10W
★1N1805A	S	1N2970B	1N2970	Z						6.8	1000	5.0	10W
★1N1806	S	1N2971A	1N2970	Z						7.5	1000	10	10W
★1N1806A	S	1N2971B	1N2970	Z						7.5	1000	5.0	10W
★1N1807	S	1N2972A	1N2970	Z						8.2	1000	10	10W
★1N1807A	S	1N2972B	1N2970	Z						8.2	1000	5.0	10W
★1N1808	S	1N2973A	1N2970	Z						9.1	1000	10	10W
★1N1808A	S	1N2973B	1N2970	Z						9.1	500	5.0	10W
★1N1809	S	1N3007A	1N2970	Z						110	50	10	10W
★1N1809A	S	1N3007B	1N2970	Z						110	50	5.0	10W
★1N1810	S	1N3008A	1N2970	Z						120	50	10	10W
★1N1810A	S	1N3008B	1N2970	Z						120	50	5.0	10W
★1N1811	S	1N3009A	1N2970	Z						130	50	10	10W
★1N1811A	S	1N3009B	1N2970	Z						130	50	5.0	10W
★1N1812	S	1N3011A	1N2970	Z						150	50	10	10W
★1N1812A	S	1N3011B	1N2970	Z						150	50	5.0	10W
★1N1813	S	1N3012A	1N2970	Z						160	50	10	10W
★1N1813A	S	1N3012B	1N2970	Z						160	50	5.0	10W
★1N1814	S	1N3014A	1N2970	Z						180	50	10	10W
★1N1814A	S	1N3014B	1N2970	Z						180	50	5.0	10W
★1N1815	S	1N3015A	1N2970	Z						200	50	10	10W
★1N1815A	S	1N3015B	1N2970	Z						200	50	5.0	10W
★1N1816	S	1N2977A	1N2970	Z						13	500	10	10W
★1N1816A	S	1N2977B	1N2970	Z						13	500	5.0	10W
★1N1817	S	1N2979A	1N2970	Z						15	500	10	10W
★1N1817A	S	1N2979B	1N2970	Z						15	500	5.0	10W
★1N1818	S	1N2980A	1N2970	Z						16	500	10	10W
★1N1818A	S	1N2980B	1N2970	Z						16	500	5.0	10W
★1N1819	S	1N2982A	1N2970	Z						18	500	10	10W
★1N1819A	S	1N2982B	1N2970	Z						18	500	5.0	10W
★1N1820	S	1N2984A	1N2970	Z						20	250	10	10W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N1820A	S	1N2984B	1N2970	Z						20	250	5.0	10W
★1N1821	S	1N2985A	1N2970	Z						22	250	10	10W
★1N1821A	S	1N2985B	1N2970	Z						22	250	5.0	10W
★1N1822	S	1N2986A	1N2970	Z						24	250	10	10W
★1N1822A	S	1N2986B	1N2970	Z						24	250	5.0	10W
★1N1823	S	1N2988A	1N2970	Z						27	250	10	10W
★1N1823A	S	1N2988B	1N2970	Z						27	250	5.0	10W
★1N1824	S	1N2989A	1N2970	Z						30	250	10	10W
★1N1824A	S	1N2989B	1N2970	Z						30	250	5.0	10W
★1N1825	S	1N2990A	1N2970	Z						33	150	10	10W
★1N1825A	S	1N2990B	1N2970	Z						33	150	5.0	10W
★1N1826	S	1N2991A	1N2970	Z						36	150	10	10W
★1N1826A	S	1N2991B	1N2970	Z						36	150	5.0	10W
★1N1827	S	1N2992A	1N2970	Z						39	150	10	10W
★1N1827A	S	1N2992B	1N2970	Z						39	150	5.0	10W
★1N1828	S	1N2993A	1N2970	Z						43	150	10	10W
★1N1828A	S	1N2993B	1N2970	Z						43	150	5.0	10W
★1N1829	S	1N2995A	1N2970	Z						47	150	10	10W
★1N1829A	S	1N2995B	1N2970	Z						47	150	5.0	10W
★1N1830	S	1N2997A	1N2970	Z						51	150	10	10W
★1N1830A	S	1N2997B	1N2970	Z						51	150	5.0	10W
★1N1831	S	1N2999A	1N2970	Z						56	150	10	10W
★1N1831A	S	1N2999B	1N2970	Z						56	150	5.0	10W
★1N1832	S	1N3000A	1N2970	Z						62	50	10	10W
★1N1832A	S	1N3000B	1N2970	Z						62	50	5.0	10W
★1N1833	S	1N3001A	1N2970	Z						68	50	10	10W
★1N1833A	S	1N3001B	1N2970	Z						68	50	5.0	10W
★1N1834	S	1N3002A	1N2970	Z						75	50	10	10W
★1N1834A	S	1N3002B	1N2970	Z						75	50	5.0	10W
★1N1835	S	1N3003A	1N2970	Z						82	50	10	10W
★1N1835A	S	1N3003B	1N2970	Z						82	50	5.0	10W
★1N1836	S	1N3004A	1N2970	Z						91	50	10	10W
★1N1836A	S	1N3004B	1N2970	Z						91	50	5.0	10W
1N1838	G		Table 4	M									
1N1839	S			G	6.8	1.0	0.085		0.26				
1N1840	S			G	10	1.0	0.077		0.23				
1N1841	S			G	15	1.0	0.063		0.19				
1N1842	S			G	22	1.0	0.05		0.15				
1N1843	S			G	33	1.0	0.04		0.12				
1N1844	S			G	47	1.0	0.03		0.095				
1N1845	S			G	68	1.0	0.023	0.001	0.072				
1N1846	S			G	100	1.0	0.016	0.001	0.050				
1N1847	S			G	150	1.0	0.011	0.003	0.035				
1N1848	S			G	220	4.0	0.009	0.005	0.028				
1N1849	S			G	330	4.0	0.0075	0.005	0.024				
1N1850	S			G	470	4.0	0.006	0.005	0.020				
1N1851	S			G	6.8		0.085		0.26				
1N1852	S			G	10		0.077		0.23				
1N1853	S			G	15		0.063		0.190				
1N1854	S			G	22		0.05		0.150				
1N1855	S			G	33		0.04		0.120				
1N1856	S			G	47		0.03		0.095				
1N1857	S			G	68		0.023	0.001	0.072				
1N1858	S			G	100		0.016	0.001	0.050				
1N1859	S			G	150		0.011	0.003	0.035				
1N1860	S			G	220		0.009	0.005	0.028				
1N1861	S			G	330			0.005	0.024				
1N1862	S			G	470		0.006	0.005	0.020				
1N1863	S			G	6.8		0.085		0.260				
1N1864	S			G	10		0.077		0.230				
1N1865	S			G	15		0.063		0.190				
1N1866	S			G	22		0.05		0.150				
1N1867	S			G	33		0.04		0.120				
1N1868	S			G	47		0.03		0.095				
1N1869	S			G	68		0.023	0.001	0.072				
1N1870	S			G	100		0.016	0.001	0.050				
1N1871	S			G	150		0.011	0.003	0.035				
1N1872	S			G	220		0.009	0.005	0.028				
1N1873	S			G	330			0.005	0.024				
1N1874	S			G	470		0.006	0.005	0.020				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N1875	S	1N4738	1N4728	Z						8.2	25	10	1.0W
1N1876	S	1N4740	1N4728	Z						10	25	10	1.0W
1N1877	S	1N4742	1N4728	Z						12	25	10	1.0W
1N1878	S	1N4744	1N4728	Z						15	25	10	1.0W
1N1879	S	1N4746	1N4728	Z						18	25	10	1.0W
1N1880	S	1N4748	1N4728	Z						22	8.0	10	1.0W
1N1881	S	1N4750	1N4728	Z						27	8.0	10	1.0W
1N1882	S	1N4752	1N4728	Z						33	8.0	10	1.0W
1N1883	S	1N4754	1N4728	Z						39	8.0	10	1.0W
1N1884	S	1N4756	1N4728	Z						47	8.0	10	1.0W
1N1885	S	1N4758	1N4728	Z						56	8.0	10	1.0W
1N1886	S	1N4760	1N4728	Z						68	3.0	10	1.0W
1N1887	S	1N4762	1N4728	Z						82	3.0	10	1.0W
1N1888	S	1N4764	1N4728	Z						100	3.0	10	1.0W
1N1889	S	1M120ZS10	1N4728	Z						120	3.0	10	1.0W
1N1890	S	1M150ZS10	1N4728	Z						150	3.0	10	1.0W
1N1891	S	1N2972A	1N2970	Z						8.2	25	10	10W
1N1892	S	1N2974A	1N2970	Z						10	25	10	10W
1N1893	S	1N2976A	1N2970	Z						10	25	10	10W
1N1894	S	1N2979A	1N2970	Z						15	25	10	10W
1N1895	S	1N2982A	1N2970	Z						18	25	10	10W
1N1896	S	1N2985A	1N2970	Z						22	8.0	10	10W
1N1897	S	1N2988A	1N2970	Z						27	8.0	10	10W
1N1898	S	1N2990A	1N2970	Z						33	8.0	10	10W
1N1899	S	1N2992A	1N2970	Z						39	8.0	10	10W
1N1900	S	1N2995A	1N2970	Z						47	8.0	10	10W
1N1901	S	1N2999A	1N2970	Z						56	8.0	10	10W
1N1902	S	1N3001A	1N2970	Z						68	3.0	10	10W
1N1903	S	1N3003A	1N2970	Z						82	3.0	10	10W
1N1904	S	1N3005A	1N2970	Z						100	3.0	10	10W
1N1905	S	1N3008A	1N2970	Z						120	3.0	10	10W
1N1906	S	1N3011A	1N2970	Z						150	3.0	10	10W
1N1907	S	1N4001	1N4001	G	50	1.0	1.5	0.01	30				
1N1908	S	1N4002	1N4001	G	100	1.0	1.5	0.01	30				
1N1909	S	1N4003	1N4001	G	200	1.0	1.5	0.01	30				
1N1910	S			G	300	1.0	1.5	0.01	30				
1N1911	S	1N4004	1N4001	G	400	1.0	1.5	0.01	30				
1N1912	S	1N4005	1N4001	G	500	1.0	1.5	0.01	30				
1N1913	S	1N4005	1N4001	G	600	1.0	1.5	0.01	30				
1N1914	S	1N4006	1N4001	G	700	1.0	1.5	0.01	30				
1N1915	S	1N4006	1N4001	G	800	1.0	1.5	0.01	30				
1N1916	S	1N4007	1N4001	G	900	1.0	1.5	0.01	30				
1N1917	S			G	50	1.0	4.0	0.01	30				
1N1918	S			G	100	1.0	4.0	0.01	30				
1N1919	S			G	200	1.0	4.0	0.01	30				
1N1920	S			G	300	1.0	4.0	0.01	30				
1N1921	S			G	400	1.0	4.0	0.01	30				
1N1922	S			G	500	1.0	4.0	0.01	30				
1N1923	S			G	600	1.0	4.0	0.01	30				
1N1924	S			G	700	1.0	4.0	0.01	30				
1N1925	S			G	800	1.0	4.0	0.01	30				
1N1926	S			G	900	1.0	4.0	0.01	30				
1N1927	S	1N5228A	1N5221	Z						3.9	5.0	10	200m
1N1928	S	1N5230A	1N5221	Z						4.7	5.0	10	200m
1N1929	S	1N5232A	1N5221	Z						5.6	5.0	10	200m
1N1930	S	1N5235A	1N5221	Z						6.8	5.0	10	200m
1N1931	S	1N5237A	1N5221	Z						8.2	5.0	10	200m
1N1932	S	1N5240A	1N5221	Z						10	5.0	10	200m
1N1933	S	1N5242A	1N5221	Z						12	1.0	10	200m
1N1934	S	1N5245A	1N5221	Z						15	1.0	10	200m
1N1935	S	1N5248A	1N5221	Z						18	1.0	10	200m
1N1936	S	1N5251A	1N5221	Z						22	1.0	10	200m
1N1937	S	1N5254A	1N5221	Z						27	1.0	10	200m
1N1938	S	1N5257A	1N5221	Z						33	0.2	10	200m
1N1939	S	1N5259A	1N5221	Z						39	0.2	10	200m
1N1940	S	1N5261A	1N5221	Z						47	0.2	10	200m
1N1941	S	1N5263A	1N5221	Z						56	0.2	10	200m
1N1942	S	1N5266A	1N5221	Z						68	0.2	10	200m
1N1943	S	1N5268A	1N5221	Z						82	0.2	10	200m
1N1944	S	1N5271A	1N5221	Z						100	0.2	10	200m

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N1945	S	1N5273A	1N5221	Z						120	0.2	10	200m
1N1946	S	1N5276A	1N5221	Z						150	0.1	10	200m
1N1947	S	1N5279A	1N5221	Z						180	0.1	10	200m
1N1948	S			Z						220	0.1	10	200m
1N1949	S			Z						270	0.1	10	200m
1N1950	S			Z						330	0.1	10	200m
1N1951	S			Z						390	0.1	10	200m
1N1952	S			Z						470	0.1	10	200m
1N1953	S			Z						560	0.1	10	200m
1N1954	S	1N5228A	1N5221	Z						3.9	5.0	10	400m
1N1955	S	1N5230A	1N5221	Z						4.7	5.0	10	400m
1N1956	S	1N5232A	1N5221	Z						5.6	5.0	10	400m
1N1957	S	1N5235A	1N5221	Z						6.8	5.0	10	400m
1N1958	S	1N5237A	1N5221	Z						8.2	5.0	10	400m
1N1959	S	1N5240A	1N5221	Z						10	5.0	10	400m
1N1960	S	1N5242A	1N5221	Z						12	1.0	10	400m
1N1961	S	1N5245A	1N5221	Z						15	1.0	10	400m
1N1962	S	1N5248A	1N5221	Z						18	1.0	10	400m
1N1963	S	1N5251A	1N5221	Z						22	1.0	10	400m
1N1964	S	1N5254A	1N5221	Z						27	1.0	10	400m
1N1965	S	1N5257A	1N5221	Z						33	0.2	10	400m
1N1966	S	1N5259A	1N5221	Z						39	0.2	10	400m
1N1967	S	1N5261A	1N5221	Z						47	0.2	10	400m
1N1968	S	1N5263A	1N5221	Z						56	0.2	10	400m
1N1969	S	1N5266A	1N5221	Z						68	0.2	10	400m
1N1970	S	1N5268A	1N5221	Z						82	0.2	10	400m
1N1971	S	1N5271A	1N5221	Z						100	0.2	10	400m
1N1972	S	1N5273A	1N5221	Z						120	0.2	10	400m
1N1973	S	1N5276A	1N5221	Z						150	0.1	10	400m
1N1974	S	1N5279A	1N5221	Z						180	0.1	10	400m
1N1975	S			Z						220	0.1	10	400m
1N1976	S			Z						270	0.1	10	400m
1N1977	S			Z						330	0.1	10	400m
1N1978	S			Z						390	0.1	10	400m
1N1979	S			Z						470	0.1	10	400m
1N1980	S			Z						560	0.1	10	400m
1N1981	S	1N5228A	1N5221	Z						3.9	5.0	10	150m
1N1982	S	1N5230A	1N5221	Z						4.7	5.0	10	150m
1N1983	S	1N5232A	1N5221	Z						5.6	5.0	10	150m
1N1984	S	1N5235A	1N5221	Z						6.8	5.0	10	150m
1N1985	S	1N5237A	1N5221	Z						8.2	5.0	10	150m
1N1986	S	1N5240A	1N5221	Z						10	5.0	10	150m
1N1987	S	1N5242A	1N5221	Z						12	1.0	10	150m
1N1988	S	1N5245A	1N5221	Z						15	1.0	10	150m
1N1989	S	1N5248A	1N5221	Z						18	1.0	10	150m
1N1990	S	1N5251A	1N5221	Z						22	1.0	10	150m
1N1991	S	1N5254A	1N5221	Z						27	1.0	10	150m
1N1992	S	1N5257A	1N5221	Z						33	0.2	10	150m
1N1993	S	1N5259A	1N5221	Z						39	0.2	10	150m
1N1994	S	1N5261A	1N5221	Z						47	0.2	10	150m
1N1995	S	1N5263A	1N5221	Z						56	0.2	10	150m
1N1996	S	1N5266A	1N5221	Z						68	0.2	10	150m
1N1997	S	1N5268A	1N5221	Z						82	0.2	10	150m
1N1998	S	1N5271A	1N5221	Z						100	0.2	10	150m
1N1999	S	1N5273A	1N5221	Z						120	0.2	10	150m
1N2000	S	1N5276A	1N5221	Z						150	0.1	10	150m
1N2001	S	1N5279A	1N5221	Z						180	0.1	10	150m
1N2002	S			Z						220	0.1	10	150m
1N2003	S			Z						270	0.1	10	150m
1N2004	S			Z						330	0.1	10	150m
1N2005	S			Z						390	0.1	10	150m
1N2006	S			Z						470	0.1	10	150m
1N2007	S			Z						560	0.1	10	150m
★1N2008	S	1N3005A	1N2970	Z						100	50	10	10W
★1N2009	S	1N3007A	1N2970	Z						110	50	10	10W
★1N2010	S	1N3008A	1N2970	Z						120	50	10	10W
★1N2011	S	1N3009A	1N2970	Z						130	50	10	10W
★1N2012	S	1N3011A	1N2970	Z						150	50	10	10W
1N3013	S	1N4001	1N4001	G	50	1.2	0.25	0.25	10				
1N2014	S	1N4002	1N4001	G	100	1.2	0.25	0.25	10				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N2015	S	1N4003	1N4001	G	150	1.2	0.25	0.25	10				
1N2016	S	1N4003	1N4001	G	200	1.2	0.25	0.25	10				
1N2017	S	1N4004	1N4001	G	250	1.2	0.25	0.25	10				
1N2018	S	1N4004	1N4001	G	300	1.2	0.25	0.25	10				
1N2019	S	1N4004	1N4001	G	350	1.2	0.25	0.25	10				
1N2020	S	1N4004	1N4001	G	400	1.2	0.25	0.25	10				
1N2021	S	1N1185	1N1183	G	150	1.5	10	5.0	110				
1N2022	S	1N1187	1N1183	G	250	1.5	10	5.0	110				
1N2023	S	1N1187	1N1183	G	300	1.5	10	5.0	110				
1N2024	S	1N1188	1N1183	G	350	1.5	10	5.0	110				
1N2025	S	1N1188	1N1183	G	400	1.5	10	5.0	110				
1N2026	S	MR1120	MR1120	G	50	2.0	1.0	0.5	25				
1N2027	S	MR1122	MR1120	G	200	2.0	1.0	0.5	25				
1N2028	S	MR1123	MR1120	G	300	2.0	1.0	0.5	25				
1N2029	S	MR1124	MR1120	G	400	2.0	1.0	0.5	25				
1N2030	S	MR1125	MR1120	G	500	2.0	1.0	0.5	25				
1N2031	S	MR1126	MR1120	G	600	2.0	1.0	0.5	25				
★1N2032	S	1N4732	1N4728	Z						4.4	10	5.0	750m
★1N2033	S	1N4734	1N4728	Z						5.6	10	5.0	750m
★1N2034	S	1N4736	1N4728	Z						6.6	10	5.0	750m
★1N2035	S	1N4739	1N4728	Z						8.8	10	5.0	750m
★1N2036	S	1N4740	1N4728	Z						10.5	5.0	5.0	750m
★1N2037	S	1N4743	1N4728	Z						12.8	5.0	5.0	750m
★1N2038	S	1N4745	1N4728	Z						15.8	5.0	5.0	750m
★1N2039	S	1N4747	1N4728	Z						19	5.0	5.0	750m
★1N2040	S	1N4749	1N4728	Z						23.5	5.0	5.0	750m
★1N2041	S	1N3995	1N3993	Z						4.9	1.0	5.0	10W
★1N2042	S	1N3997	1N3993	Z						5.8	1.0	5.0	10W
★1N2043	S	1N2970RA	1N2970	Z						6.6	1.0	5.0	10W
★1N2044	S	1N2973RA	1N2970	Z						8.8	500	5.0	10W
★1N2045	S	1N2974RB	1N2970	Z						10.5	500	5.0	10W
★1N2046	S	1N2977RA	1N2970	Z						12.8	500	5.0	10W
★1N2047	S	1N2980RA	1N2970	Z						15.8	500	5.0	10W
★1N2048	S	1N2983RA	1N2970	Z						19	500	5.0	10W
★1N2049	S	1N2986RA	1N2970	Z						23.5	150	5.0	10W
1N2054	S	MR1230SB	MR1230	G	50	1.6	250	55	4500				
1N2055	S	MR1231SB	MR1230	G	100	1.6	250	55	4500				
1N2056	S	MR1232SB	MR1230	G	150	1.6	250	55	4500				
1N2057	S	MR1233SB	MR1230	G	200	1.6	250	55	4500				
1N2058	S	MR1234SB	MR1230	G	250	1.6	250	55	4500				
1N2059	S	MR1235SB	MR1230	G	300	1.6	250	55	4500				
1N2060	S	MR1236SB	MR1230	G	350	1.6	250	55	4500				
1N2061	S	MR1237SB	MR1230	G	400	1.6	250	55	4500				
1N2062	S	MR1238SB	MR1230	G	450	1.6	250	55	4500				
1N2063	S	MR1238SB	MR1230	G	500	1.6	250	55	4500				
1N2064	S	MR1239SB	MR1230	G	600	1.6	250	55	4500				
1N2065	S			G	700	1.6	250	55	4500				
1N2066	S			G	800	1.6	250	55	4500				
1N2067	S			G	900	1.6	250	55	4500				
1N2068	S			G	1000	1.6	250	55	4500				
1N2069	S	1N4003	1N4001	G	200	0.6	0.75	0.2	22				
1N2069A	S	1N4003	1N4001	G	200	0.5	0.75	0.05	22				
1N2070	S	1N4004	1N4001	G	400	0.6	0.75	0.2	22				
1N2070A	S	1N4004	1N4001	G	400	0.5	0.75	0.05	22				
1N2071	S	1N4005	1N4001	G	600	0.6	0.75	0.2	22				
1N2071A	S	1N4005	1N4001	G	600	0.5	0.75	0.05	22				
1N2072	S	1N4001	1N4001	G	50	1.1	0.625	0.25	30				
1N2073	S	1N4002	1N4001	G	100	1.1	0.625	0.25	30				
1N2074	S	1N4003	1N4001	G	150	1.1	0.625	0.25	30				
1N2075	S	1N4003	1N4001	G	200	1.1	0.625	0.25	30				
1N2076	S	1N4004	1N4001	G	250	1.1	0.625	0.25	30				
1N2077	S	1N4004	1N4001	G	300	1.1	0.625	0.25	30				
1N2078	S	1N4004	1N4001	G	400	1.1	0.625	0.25	30				
1N2079	S	1N4005	1N4001	G	500	1.1	0.625	0.25	30				
1N2080	S	1N4001	1N4001	G	50	0.75	0.5	0.35	15				
1N2081	S	1N4002	1N4001	G	100	0.75	0.5	0.35	15				
1N2082	S	1N4003	1N4001	G	200	0.75	0.5	0.35	15				
1N2083	S	1N4004	1N4001	G	300	0.75	0.5	0.35	15				
1N2084	S	1N4004	1N4001	G	400	0.75	0.5	0.35	15				
1N2085	S	1N4005	1N4001	G	500	0.75	0.5	0.35	15				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N2086	S	1N4005	1N4001	G	600	0.75	0.5	0.35	15				
1N2088	S			G	500	1.2	0.75	0.5	30				
1N2089	S			G	600	1.2	0.75	0.5	30				
1N2090	S			G	50	0.5	0.5	0.25	15				
1N2091	S			G	100	0.5	0.5	0.25	15				
1N2092	S			G	200	0.5	0.5	0.25	15				
1N2093	S			G	300	0.5	0.5	0.25	15				
1N2094	S			G	400	0.5	0.5	0.25	15				
1N2095	S			G	500	0.5	0.5	0.25	15				
1N2096	S			G	600	0.5	0.5	0.25	15				
1N2102	S		Table 4	M									
1N2103	S	1N4001	1N4001	G	50	1.2	0.75	0.3	10				
1N2104	S	1N4002	1N4001	G	100	1.2	0.75	0.3	10				
1N2105	S	1N4003	1N4001	G	200	1.2	0.75	0.3	10				
1N2106	S	1N4004	1N4001	G	300	1.2	0.75	0.3	10				
1N2107	S	1N4004	1N4001	G	400	1.2	0.75	0.3	10				
1N2108	S	1N4005	1N4001	G	500	1.2	0.75	0.3	10				
1N2109	S			G	50	1.2	2.0	0.3	10				
1N2110	S			G	100	1.2	2.0	0.3	10				
1N2111	S			G	200	1.2	2.0	0.3	10				
1N2112	S			G	300	1.2	2.0	0.3	10				
1N2113	S			G	400	1.2	2.0	0.3	10				
1N2114	S			G	500	1.2	2.0	0.3	10				
1N2115	S	1N4004	1N4001	G	365	0.8	0.2	0.25	10				
1N2116	S			G	400	1.4	0.5	0.4	15				
1N2117	S	1N4006	1N4001	G	720	1.3	0.75	0.010	15				
1N2127	S		Table 4	M									
1N2127A	S		Table 4	M									
1N2128	S	MR1200FL	MR1200	G	50	2.0	60	10	700				
1N2128A	S	MR1200FL	MR1200	G	50	2.0	60	10	900				
1N2129	S	MR1201FL	MR1200	G	100	2.0	60	10	700				
1N2129A	S	MR1201FL	MR1200	G	100	2.0	60	10	900				
1N2130	S	MR1202FL	MR1200	G	150	2.0	60	10	700				
1N2130A	S	MR1202FL	MR1200	G	150	2.0	60	10	900				
1N2131	S	MR1203FL	MR1200	G	200	2.0	60	10	700				
1N2131A	S	MR1203FL	MR1200	G	200	2.0	60	10	900				
1N2132	S	MR1204FL	MR1200	G	250	2.0	60	10	700				
1N2132A	S	MR1204FL	MR1200	G	250	2.0	60	10	900				
1N2133	S	MR1205FL	MR1200	G	300	2.0	60	10	700				
1N2133A	S	MR1205FL	MR1200	G	300	2.0	60	10	900				
1N2134	S	MR1206FL	MR1200	G	350	2.0	60	10	700				
1N2134A	S	MR1206FL	MR1200	G	350	2.0	60	10	900				
1N2135	S	MR1207FL	MR1200	G	400	2.0	60	10	700				
1N2135A	S	MR1207FL	MR1200	G	400	2.0	60	10	900				
1N2136	S			G	450	2.0	60	10	700				
1N2136A	S			G	450	2.0	60	10	900				
1N2137	S			G	500	2.0	60	10	700				
1N2137A	S			G	500	2.0	60	10	900				
1N2138	S			G	600	2.0	60	10	700				
1N2138A	S			G	600	2.0	60	10	900				
1N2139	S			G	20k	60	0.052	0.2	3.5				
1N2146	S			S	120	1.1	500m	1.0*	0.1				
1N2147	S			G	50	1.2	6.0	0.5	150				
1N2147A	S			G	50	1.0	6.0	0.1	150				
1N2148	S			G	100	1.2	6.0	0.5	150				
1N2148A	S			G	100	1.0	6.0	0.1	150				
1N2149	S			G	200	1.2	6.0	0.5	150				
1N2149A	S			G	200	1.0	6.0	0.1	150				
1N2150	S			G	300	1.2	6.0	0.5	150				
1N2150A	S			G	300	1.0	6.0	0.1	150				
1N2151	S			G	400	1.2	6.0	0.5	150				
1N2151A	S			G	400	1.0	6.0	0.1	150				
1N2152	S			G	500	1.2	6.0	0.5	150				
1N2152A	S			G	500	1.0	6.0	0.1	150				
1N2153	S			G	600	1.2	6.0	0.5	150				
1N2153A	S			G	600	1.0	6.0	0.1	150				
1N2154	S	1N1183	1N1183	G	50	0.6	25	5.0	300				
1N2155	S	1N1184	1N1183	G	100	0.6	25	4.5	300				
1N2156	S	1N1186	1N1183	G	200	0.6	25	4.0	300				
1N2157	S	1N1187	1N1183	G	300	0.6	25	3.5	300				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N2158	S	1N1188	1N1183	G	400	0.6	25	3.0	300				
1N2159	S	1N1189	1N1183	G	500	0.6	25	2.5	300				
1N2160	S	1N1190	1N1183	G	600	0.6	25	2.0	300				
★1N2163	S		1N2163	G						9.4	0.05	10	0/+70
★1N2163A	S		1N2163	G						9.4	0.05	10	0/+70
★1N2164	S		1N2163	G						9.4	0.05	10	-55/+125
★1N2164A	S		1N2163	G						9.4	0.05	10	-55/+125
★1N2165	S		1N2163	G						9.4	0.05	10	-55/+185
★1N2165A	S		1N2163	G						9.4	0.05	10	-55/+185
★1N2166	S		1N2163	G						9.4	0.001	10	0/+70
★1N2166A	S		1N2163	G						9.4	0.001	10	0/+70
★1N2167	S		1N2163	G						9.4	0.001	10	-55/+125
★1N2167A	S		1N2163	G						9.4	0.001	10	-55/+125
★1N2168	S		1N2163	R						9.4	0.001	10	-55/+185
★1N2168A	S		1N2163	R						9.4	0.001	10	-55/+185
★1N2169	S		1N2163	R						9.4	0.0005	10	0/+70
★1N2169A	S		1N2163	R						9.4	0.0005	10	0/+70
★1N2170	S		1N2163	R						9.4	0.0005	10	-55/+125
★1N2170A	S		1N2163	R						9.4	0.0005	10	-55/+125
★1N2171	S		1N2163	R						9.4	0.0005	10	-55/+185
★1N2171A	S		1N2163	R						9.4	0.0005	10	-55/+185
1N2172	S			G	50	1.5	50	0.25	525				
1N2173	S			G	100	1.5	50	0.25	525				
1N2174	S			G	200	1.5	50	0.25	525				
1N2175				D									
1N2176	S			G	50	1.1	3.0	0.3	15				
1N2177	S			G	100	1.1	3.0	0.3	15				
1N2178	S			G	150	1.1	3.0	0.3	15				
1N2179	S			G	200	1.1	3.0	0.3	15				
1N2180	S			G	300	1.1	3.0	0.3	15				
1N2181	S			G	400	1.1	3.0	0.3	15				
1N2182	S			G	500	1.1	3.0	0.3	15				
1N2183	S			G	600	1.1	3.0	0.3	15				
1N2184	S			G	50	1.5	3.0	5.0	40				
1N2185	S			G	100	1.5	3.0	5.0	40				
1N2186	S			G	150	1.5	3.0	5.0	40				
1N2187	S			G	200	1.5	3.0	5.0	40				
1N2188	S			G	300	1.5	3.0	5.0	40				
1N2189	S			G	400	1.5	3.0	5.0	40				
1N2190	S			G	500	1.5	3.0	5.0	40				
1N2191	S			G	600	1.5	3.0	5.0	40				
1N2192	S			G	800	1.5	3.0	5.0	40				
1N2193	S			G	1000	1.5	3.0	5.0	40				
1N2194	S			G	50	1.25	6.0	10	100				
1N2195	S			G	100	1.25	6.0	10	100				
1N2196	S			G	150	1.25	6.0	10	100				
1N2197	S			G	200	1.25	6.0	10	100				
1N2198	S			G	300	1.25	6.0	10	100				
1N2199	S			G	400	1.25	6.0	10	100				
1N2200	S			G	500	1.25	6.0	10	100				
1N2201	S			G	600	1.25	6.0	10	100				
1N2202	S			G	800	1.25	6.0	10	100				
1N2203	S			G	1000	1.25	6.0	10	100				
1N2204	S			G	50	1.25	12	10	200				
1N2205	S			G	100	1.25	12	10	200				
1N2206	S			G	150	1.25	12	10	200				
1N2207	S			G	200	1.25	12	10	200				
1N2208	S			G	300	1.25	12	10	200				
1N2209	S			G	400	1.25	12	10	200				
1N2210	S			G	500	1.25	12	10	200				
1N2211	S			G	600	1.25	12	10	200				
1N2212	S			G	800	1.25	12	10	200				
1N2213	S			G	1000	1.25	12	10	200				
1N2214	S			Z						5.6	35		1.0W
1N2217	S	MR1120	MR1120	G	50		1.5	0.003	20				
1N2218	S	MR1125	MR1120	G	500	1.2	0.4	0.003	20				
1N2219	S			G	500		1.5	0.003	20				
1N2220	S	MR1126	MR1120	G	600	1.2	0.4	0.003	20				
1N2221	S			G	600		1.5	0.003	20				
1N2222	S	MR1128	MR1120	G	800	1.2	0.3	0.003	20				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N2222A	S			G	800	1.2	0.3	0.003	20				
1N2223	S			G	800		1.0	0.003	20				
1N2223A	S			G	800		1.0	0.003	20				
1N2224	S	MR1130	MR1120	G	1000	1.2	0.3	0.003	20				
1N2224A	S			G	1000	1.2	0.3	0.003	20				
1N2225	S			G	1000		1.0	0.003	20				
1N2225A	S			G	1000		1.0	0.003	20				
1N2226	S			G	1200	1.2	0.3	0.003	20				
1N2226A	S			G	1200	1.2	0.3	0.003	20				
1N2227	S			G	1200		1.0	0.003	20				
1N2227A	S			G	1200		1.0	0.003	20				
1N2228	S	MR1120	MR1120	G	50	1.2	1.0	0.003	100				
1N2228A	S	MR1120	MR1120	G	50	1.2	1.6	0.003	100				
1N2229	S			G	50		5.0	0.003	100				
1N2229A	S			G	50		5.0	0.003	100				
1N2230	S	MR1122	MR1120	G	200	1.2	1.0	0.003	100				
1N2230A	S	MR1122	MR1120	G	200	1.2	1.6	0.003	100				
1N2231	S			G	200		5.0	0.003	100				
1N2231A	S	MR1123	MR1120	G	200		5.0	0.003	100				
1N2232	S	MR1123	MR1120	G	300	1.2	1.0	0.003	100				
1N2232A	S			G	300	1.2	1.6	0.003	100				
1N2233	S			G	300		5.0	0.003	100				
1N2233A	S			G	300		5.0	0.003	100				
1N2234	S	MR1124	MR1120	G	400	1.2	1.0	0.003	100				
1N2234A	S	MR1124	MR1120	G	400	1.2	1.6	0.003	100				
1N2235	S			G	400		5.0	0.003	100				
1N2235A	S			G	400		5.0	0.003	100				
1N2236	S	MR1125	MR1120	G	500	1.2	1.0	0.003	100				
1N2236A	S	MR1125	MR1120	G	500	1.2	1.6	0.003	100				
1N2237	S			G	500		5.0	0.003	100				
1N2237A	S			G	500		5.0	0.003	100				
1N2238	S	MR1126	MR1120	G	600	1.2	1.0	0.003	100				
1N2238A	S	MR1126	MR1120	G	600	1.2	1.6	0.003	100				
1N2239	S			G	600		5.0	0.003	100				
1N2239A	S			G	600		5.0	0.003	100				
1N2240	S	MR1128	MR1120	G	800	1.2	1.5	0.003	100				
1N2240A	S	MR1128	MR1120	G	800	1.2	1.5	0.003	100				
1N2241	S			G	800		5.0	0.003	100				
1N2241A	S			G	800		5.0	0.003	100				
1N2242	S	MR1130	MR1120	G	1000	1.2	1.5	0.003	100				
1N2242A	S	MR1130	MR1120	G	1000	1.2	1.6	0.003	100				
1N2243	S			G	1000		5.0	0.003	100				
1N2243A	S			G	1000		5.0	0.003	100				
1N2244	S			G	1200	1.2	1.5	0.003	100				
1N2244A	S			G	1200	1.2	1.6	0.003	100				
1N2245	S			G	1200		5.0	0.003	100				
1N2245A	S			G	1200		5.0	0.003	100				
1N2246	S			G	50	1.2	3.0	0.005	200				
1N2246A	S			G	50	1.2	3.0	0.003	200				
1N2247	S			G	50		10	0.005	200				
1N2247A	S			G	50		10	0.003	200				
1N2248	S			G	100	1.2	3.0	0.005	200				
1N2248A	S			G	100	1.2	3.0	0.003	200				
1N2249	S			G	100		10	0.005	200				
1N2249A	S			G	100		10	0.003	200				
1N2250	S			G	200	1.2	3.0	0.005	200				
1N2250A	S			G	200	1.2	3.0	0.003	200				
1N2251	S			G	200		5.0	0.005	200				
1N2251A	S			G	200		10	0.003	200				
1N2252	S			G	300	1.2	3.0	0.005	200				
1N2252A	S			G	300	1.2	3.0	0.003	200				
1N2253	S			G	300		10	0.005	200				
1N2253A	S			G	300		10	0.003	200				
1N2254	S			G	400	1.2	3.0	0.005	200				
1N2254A	S			G	400	1.2	3.0	0.003	200				
1N2255	S			G	400		10	0.005	200				
1N2255A	S			G	400		10	0.003	200				
1N2256	S			G	500	1.2	3.0	0.005	200				
1N2256A	S			G	500	1.2	3.0	0.003	200				
1N2257	S			G	500		10	0.005	200				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N2257A	S			G	500		10	0.005	200				
1N2258	S			G	600	1.2	3.0	0.005	200				
1N2258A	S			G	600	1.2	3.0	0.003	200				
1N2259	S			G	600		10	0.005	200				
1N2259A	S			G	600		10	0.003	200				
1N2260	S			G	800	1.2	3.0	0.003	200				
1N2260A	S			G	800	1.2	3.0	0.005	200				
1N2261	S			G	800		10	0.01	200				
1N2261A	S			G	800		10	0.005	200				
1N2262	S			G	1000	1.2	3.0	0.010	200				
1N2262A	S			G	1000	1.2	3.0	0.005	200				
1N2263	S			G	1000		10	0.01	200				
1N2263A	S			G	1000		10	0.005	200				
1N2264	S			G	1200	1.2	3.0	0.010	200				
1N2264A	S			G	1200	1.2	3.0	0.005	200				
1N2265	S			G	1200		10	0.01	200				
1N2265A	S			G	1200		10	0.005	200				
1N2266	S	MR1120	MR1120	G	50	1.2	0.3	0.003	20				
1N2267	S			G	50		1.0	0.003	20				
1N2268	S	MR1125	MR1120	G	500	1.2	0.3	0.003	20				
1N2269	S			G	500		1.0	0.003	20				
1N2270	S	MR1126	MR1120	G	600	1.2	0.3	0.003	20				
1N2271	S			G	600		1.0	0.003	20				
1N2272	S	MR1120	MR1120	G	50	1.2	6.0	1.0	400				
1N2273	S	MR1121	MR1120	G	100	1.2	6.0	1.0	400				
1N2274	S	MR1122	MR1120	G	200	1.2	6.0	1.0	400				
1N2275	S	MR1123	MR1120	G	300	1.2	6.0	1.0	400				
1N2276	S	MR1124	MR1120	G	400	1.2	6.0	1.0	400				
1N2277	S	MR1125	MR1120	G	500	1.2	6.0	1.0	400				
1N2278	S	MR1126	MR1120	G	600	1.2	6.0	1.0	400				
1N2279	S	MR1128	MR1120	G	800	1.2	6.0	1.0	400				
1N2280	S			G	1000	1.2	6.0	1.0	400				
1N2281	S			G	1200	1.2	6.0	1.0	400				
1N2282	S			G	300	1.5	20	5.0	400				
1N2283	S			G	400	1.5	20	5.0	400				
1N2284	S			G	500	1.5	20	5.0	400				
1N2285	S			G	600	1.5	20	5.0	400				
1N2286	S			G	800	1.5	20	5.0	400				
1N2287	S			G	1000	1.5	20	5.0	400				
1N2288	S			G	1200	1.5	20	5.0	400				
1N2289	S			G	100		1.5	0.003	20				
1N2289A	S			G	100		1.5	0.003	20				
1N2290	S			G	100		5.0	0.003	100				
1N2290A	S			G	100		5.0	0.003	100				
1N2291	S			G	200		1.5	0.003	20				
1N2291A	S			G	200		1.5	0.003	20				
1N2292	S			G	300		1.5	0.003	20				
1N2292A	S			G	300		1.5	0.003	20				
1N2293	S			G	400		1.5	0.003	20				
1N2293A	S			G	400		1.5	0.003	20				
1N2294	S			G	50	1.1	22	10	160				
1N2295	S			G	100	1.1	22	10	160				
1N2296	S			G	150	1.1	22	10	160				
1N2297	S			G	200	1.1	22	10	160				
1N2298	S			G	250	1.1	22	10	160				
1N2299	S			G	300	1.1	22	10	160				
1N2300	S			G	350	1.1	22	10	160				
1N2301	S			G	400	1.1	22	10	160				
1N2302	S			G	50	1.1	22	10	160				
1N2303	S			G	100	1.1	22	10	160				
1N2304	S			G	150	1.1	22	10	160				
1N2305	S			G	200	1.1	22	10	160				
1N2306	S			G	250	1.1	22	10	160				
1N2307	S			G	300	1.1	22	10	160				
1N2308	S			G	350	1.1	22	10	160				
1N2309	S			G	400	1.1	22	10	160				
1N2310	S			G	50	1.1	35	20	300				
1N2311	S			G	100	1.1	35	20	300				
1N2312	S			G	150	1.1	35	20	300				
1N2313	S			G	200	1.1	35	20	300				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N2314	S			G	250	1.1	35	20	300				
1N2315	S			G	300	1.1	35	20	300				
1N2316	S			G	350	1.1	35	20	300				
1N2317	S			G	400	1.1	35	20	300				
1N2318	S			G	50	1.1	35	20	300				
1N2319	S			G	100	1.1	35	20	300				
1N2320	S			G	150	1.1	35	20	300				
1N2321	S			G	200	1.1	35	20	300				
1N2322	S			G	250	1.1	35	20	300				
1N2323	S			G	300	1.1	35	20	300				
1N2324	S			G	350	1.1	35	20	300				
1N2325	S			G	400	1.1	35	20	300				
1N2326	G			S	1.0	0.150	2.0m						
1N2327	S			S	300	3.3	400m	1.5*					
1N2328	S			S	300	3.3	400m	1.5*					
1N2348	S	MR1120	MR1120	G	50	1.1	3.0	0.3	15				
1N2349	S	MR1121	MR1120	G	100	1.1	3.0	0.3	15				
1N2350	S	MR1122	MR1120	G	150	1.1	3.0	0.3	15				
1N2357	S			G	1400		0.4	0.001	15				
1N2358	S			G	1500		0.4	0.001	15				
1N2359	S			G	1600		0.4	0.001	15				
1N2360	S			G	1800		0.4	0.001	15				
1N2361	S			G	2000		0.4	0.001	15				
1N2362	S			G	1400		1.0	0.001	15				
1N2362A	S			G	1400		5.0	0.001	20				
1N2362B	S			G	1400		10	0.001	25				
1N2363	S			G	1400		1.0	0.001	15				
1N2363A	S			G	1400		5.0	0.001	20				
1N2363B	S			G	1400		10	0.001	25				
1N2364	S			G	1500		1.0	0.001	15				
1N2364A	S			G	1500		5.0	0.001	20				
1N2364B	S			G	1500		10	0.001	25				
1N2365	S			G	1500		1.0	0.001	15				
1N2365A	S			G	1500		5.0	0.001	20				
1N2365B	S			G	1500		10	0.001	25				
1N2366	S			G	1600		1.0	0.001	15				
1N2366A	S			G	1600		5.0	0.001	20				
1N2366B	S			G	1600		10	0.001	25				
1N2367	S			G	1600		1.0	0.001	15				
1N2367A	S			G	1600		5.0	0.001	20				
1N2367B	S			G	1600		10	0.001	25				
1N2368	S			G	1800		1.0	0.001	15				
1N2368A	S			G	1800		5.0	0.001	20				
1N2368B	S			G	1800		10	0.001	25				
1N2369	S			G	1800		1.0	0.001	15				
1N2369A	S			G	1800		5.0	0.001	20				
1N2369B	S			G	1800		10	0.001	25				
1N2370	S			G	2000		1.0	0.001	15				
1N2370A	S			G	2000		5.0	0.001	20				
1N2370B	S			G	2000		10	0.001	25				
1N2371	S			G	2000		1.0	0.001	15				
1N2371A	S			G	2000		5.0	0.001	20				
1N2371B	S			G	2000		10	0.001	25				
1N2372	S			G	1000	2.0	0.2	0.5	12				
1N2373	S	1N4005	1N4001	G	600	3.0	0.1	0.250	12				
1N2374	S	1N4007	1N4001	G	1000	3.0	0.1	0.250	12				
1N2375	S	MR991A	MR990A	G	1500	4.5	0.1	0.250	12				
1N2376	S	MR992A	MR990A	G	2000	7.5	0.1	0.250	12				
1N2377	S	MR993A	MR990A	G	2400	9.0	0.075	0.250	12				
1N2378	S	MR994A	MR990A	G	3000	9.0	0.075	0.250	12				
1N2379	S	MR995A	MR990A	G	4000	15.0	0.05	0.250	12				
1N2380	S	1N2383	1N1730	G	6000	22.5	0.05	0.250	12				
1N2381	S	1N2385	1N1730	G	10k	37.5	0.025	0.025	12				
★1N2382	S		1N1730	G	4000	18	0.15	0.2	6.0				
1N2382A	S			G	4000	6.0	0.35	0.2	6.0				
★1N2383	S		1N1730	G	6000	27	0.1	0.2	6.0				
1N2383A	S			G	6000	9.0	0.35	0.2	6.0				
★1N2384	S		1N1730	G	8000	27	0.07	0.2	6.0				
1N2384A	S			G	8000	12	0.275	0.2	6.0				
★1N2385	S		1N1730	G	10k	39	0.07	0.2	6.0				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N2385A	S			G	10k	15	0.2	0.2	6.0				
1N2386	G			S	5.0								
1N2387	S	1N4751	1N4728	Z						30	8.0	10	1.0W
1N2389	S			G	1600	4.8	0.6	0.5	15				
1N2390	S			G	50	1.2	1.5	0.3	35				
1N2391	S			G	100	1.2	1.5	0.3	35				
1N2392	S			G	200	1.2	1.5	0.3	35				
1N2393	S			G	300	1.2	1.5	0.3	35				
1N2394	S			G	400	1.2	1.5	0.3	35				
1N2395	S			G	500	1.2	1.5	0.3	35				
1N2396	S			G	600	1.2	1.5	0.3	35				
1N2397	S			G	700	1.2	1.5	0.3	35				
1N2398	S			G	800	1.2	1.5	0.3	35				
1N2399	S			G	50	1.2	1.5	0.3	35				
1N2400	S			G	100	1.2	1.5	0.3	35				
1N2401	S			G	200	1.2	1.5	0.3	35				
1N2402	S			G	300	1.2	1.5	0.3	35				
1N2403	S			G	400	1.2	1.5	0.3	35				
1N2404	S			G	500	1.2	1.5	0.3	35				
1N2405	S			G	600	1.2	1.5	0.3	35				
1N2406	S			G	700	1.2	1.5	0.3	35				
1N2407	S			G	800	1.2	1.5	0.3	35				
1N2408	S			G	50	1.2	1.5	0.3	35				
1N2409	S			G	100	1.2	1.5	0.3	35				
1N2410	S			G	200	1.2	1.5	0.3	35				
1N2411	S			G	300	1.2	1.5	0.3	35				
1N2412	S			G	400	1.2	1.5	0.3	35				
1N2413	S			G	500	1.2	1.5	0.3	35				
1N2414	S			G	600	1.2	1.5	0.3	35				
1N2415	S			G	700	1.2	1.5	0.3	35				
1N2416	S			G	800	1.2	1.5	0.3	35				
1N2417	S			G	50	1.2	1.5	0.3	35				
1N2418	S			G	100	1.2	1.5	0.3	35				
1N2419	S			G	200	1.2	1.5	0.3	35				
1N2420	S			G	300	1.2	1.5	0.3	35				
1N2421	S			G	400	1.2	1.5	0.3	35				
1N2422	S			G	500	1.2	1.5	0.3	35				
1N2423	S			G	600	1.2	1.5	0.3	35				
1N2424	S			G	700	1.2	1.5	0.3	35				
1N2425	S			G	800	1.2	1.5	0.3	35				
1N2482	S	1N4003	1N4001	G	200	1.2	0.75	0.5	30				
1N2483	S	1N4004	1N4001	G	400	1.2	0.75	0.5	30				
1N2484	S	1N4005	1N4001	G	500	1.2	0.75	0.5	30				
1N2485	S	1N4003	1N4001	G	200	1.2	0.75	0.5	30				
1N2486	S	1N4004	1N4001	G	300	1.2	0.75	0.5	30				
1N2487	S	1N4004	1N4001	G	400	1.2	0.75	0.5	30				
1N2488	S	1N4005	1N4001	G	500	1.2	0.75	0.5	30				
1N2489	S	1N4005	1N4001	G	600	1.2	0.75	0.5	30				
1N2490	S			G	1600	4.8	0.5	0.5	15				
1N2491	S	MR1120	MR1120	G	50	1.5	6.0	2.0	150				
1N2492	S	MR1121	MR1120	G	100	1.5	6.0	2.0	150				
1N2493	S	MR1122	MR1120	G	200	1.5	6.0	2.0	150				
1N2494	S	MR1123	MR1120	G	300	1.5	6.0	2.0	150				
1N2495	S	MR1124	MR1120	G	400	1.5	6.0	2.0	150				
1N2496	S	MR1125	MR1120	G	500	1.5	6.0	2.0	150				
1N2497	S	MR1126	MR1120	G	600	1.5	6.0	2.0	150				
★1N2498	S	1N2974A	1N2970	Z						10	500	10	10W
★1N2498A	S	1N2974B	1N2970	Z						10	500	5.0	10W
★1N2499	S	1N2975A	1N2970	Z						11	500	10	10W
★1N2499A	S	1N2975B	1N2970	Z						11	500	5.0	10W
★1N2500	S	1N2976A	1N2970	Z						12	500	10	10W
1N2500A	S	1N2976B	1N2970	Z						12	500	5.0	10W
1N2501	S	1N4006	1N4001	G	800	1.7	0.15	0.2	2.5				
1N2502	S	1N4007	1N4001	G	1000	1.7	0.15	0.2	2.5				
1N2503	S			G	1200	1.7	0.15	0.2	2.5				
1N2504	S			G	1500	1.7	0.15	0.2	2.5				
1N2505	S	1N4006	1N4001	G	800	1.7	0.3	0.2	2.5				
1N2506	S	1N4006	1N4001	G	1000	1.7	0.3	0.2	2.5				
1N2507	S			G	1200	1.7	0.3	0.2	2.5				
1N2508	S			G	1500	1.7	0.3	0.2	2.5				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N2509	S		Table 4	M									
1N2510	S		Table 4	M									
1N2512	S	MR1121	MR1120	G	100	1.1	4.0	0.002	30				
1N2513	S	MR1122	MR1120	G	200	1.1	4.0	0.002	30				
1N2514	S	MR1123	MR1120	G	300	1.1	4.0	0.002	30				
1N2515	S	MR1124	MR1120	G	400	1.1	4.0	0.002	30				
1N2516	S	MR1125	MR1120	G	500	1.1	4.0	0.002	30				
1N2517	S	MR1125	MR1120	G	600	1.1	4.0	0.002	30				
1N2518	S			G	100	1.1		0.002	30				
1N2519	S			G	200	1.1		0.002	30				
1N2520	S			G	300	1.1		0.002	30				
1N2521	S			G	400	1.1		0.002	30				
1N2522	S			G	500	1.1		0.002	30				
1N2523	S			G	600	1.1		0.002	30				
1N2524	S			G	50	1.2	2.5	0.5	50				
1N2525	S			G	100	1.2	2.5	0.5	50				
1N2526	S			G	200	1.2	2.5	0.5	50				
1N2527	S			G	300	1.2	2.5	0.5	50				
1N2528	S			G	400	1.2	2.5	0.5	50				
1N2529	S			G	500	1.2	2.5	0.5	50				
1N2530	S			G	600	1.2	2.5	0.5	50				
1N2531	S			G	700	1.2	2.5	0.5	50				
1N2532	S			G	800	1.2	2.5	0.5	50				
1N2533	S			G	900	1.2	2.5	0.5	50				
1N2534	S			G	1000	1.2	2.5	0.5	50				
1N2535	S			G	50	1.0	2.5	0.1	50				
1N2536	S			G	100	1.0	2.5	0.1	50				
1N2537	S			G	200	1.0	2.5	0.1	50				
1N2538	S			G	300	1.0	2.5	0.1	50				
1N2539	S			G	400	1.0	2.5	0.1	50				
1N2540	S			G	500	1.0	2.5	0.1	50				
1N2541	S			G	600	1.0	2.5	0.1	50				
1N2542	S			G	700	1.0	2.5	0.1	50				
1N2543	S			G	800	1.0	2.5	0.1	50				
1N2544	S			G	900	1.0	2.5	0.1	50				
1N2545	S			G	1000	1.0	2.5	0.1	50				
1N2546	S			G	50	1.5	2.5	1.0	50				
1N2547	S			G	100	1.5	2.5	1.0	50				
1N2548	S			G	200	1.5	2.5	1.0	50				
1N2549	S			G	300	1.5	2.5	1.0	50				
1N2550	S			G	400	1.5	2.5	1.0	50				
1N2551	S			G	500	1.5	2.5	1.0	50				
1N2552	S			G	600	1.5	2.5	1.0	50				
1N2553	S			G	700	1.5	2.5	1.0	50				
1N2554	S			G	800	1.5	2.5	1.0	50				
1N2555	S			G	900	1.5	2.5	1.0	50				
1N2556	S			G	1000	1.5	2.5	1.0	50				
1N2557	S			G	700	1.2	6.0	0.5	150				
1N2558	S			G	800	1.2	6.0	0.5	150				
1N2559	S			G	900	1.2	6.0	0.5	150				
1N2560	S			G	1000	1.2	6.0	0.5	150				
1N2561	S			G	700	1.0	6.0	0.1	150				
1N2562	S			G	800	1.0	6.0	0.1	150				
1N2563	S			G	900	1.0	6.0	0.1	150				
1N2564	S			G	1000	1.0	6.0	0.1	150				
1N2565	S			G	50	1.5	6.0	1.0	150				
1N2566	S			G	100	1.5	6.0	1.0	150				
1N2567	S			G	200	1.5	6.0	1.0	150				
1N2568	S			G	300	1.5	6.0	1.0	150				
1N2569	S			G	400	1.5	6.0	1.0	150				
1N2570	S			G	500	1.5	6.0	1.0	150				
1N2571	S			G	600	1.5	6.0	1.0	150				
1N2572	S			G	700	1.5	6.0	1.0	150				
1N2573	S			G	800	1.5	6.0	1.0	150				
1N2574	S			G	900	1.5	6.0	1.0	150				
1N2575	S			G	1000	1.5	6.0	1.0	150				
1N2576	S			G	50	1.2	12	1.0	250				
1N2577	S			G	100	1.2	12	1.0	250				
1N2578	S			G	200	1.2	12	1.0	250				
1N2579	S			G	300	1.2	12	1.0	250				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N2580	S			G	400	1.2	12	1.0	250				
1N2581	S			G	500	1.2	12	1.0	250				
1N2582	S			G	600	1.2	12	1.0	250				
1N2583	S			G	700	1.2	12	1.0	250				
1N2584	S			G	800	1.2	12	1.0	250				
1N2585	S			G	900	1.2	12	1.0	250				
1N2586	S			G	1000	1.2	12	1.0	250				
1N2587	S			G	50	1.0	12	0.2	250				
1N2588	S			G	100	1.0	12	0.2	250				
1N2589	S			G	200	1.0	12	0.2	250				
1N2590	S			G	300	1.0	12	0.2	250				
1N2591	S			G	400	1.0	12	0.2	250				
1N2592	S			G	500	1.0	12	0.2	250				
1N2593	S			G	600	1.0	12	0.2	250				
1N2594	S			G	700	1.0	12	0.2	250				
1N2595	S			G	800	1.0	12	0.2	250				
1N2596	S			G	900	1.0	12	0.2	250				
1N2597	S			G	1000	1.0	12	0.2	250				
1N2598	S			G	50	1.5	12	2.0	250				
1N2599	S			G	100	1.5	12	2.0	250				
1N2600	S			G	200	1.5	12	2.0	250				
1N2601	S			G	300	1.5	12	2.0	250				
1N2602	S			G	400	1.5	12	2.0	250				
1N2603	S			G	500	1.5	12	2.0	250				
1N2604	S			G	600	1.5	12	2.0	250				
1N2605	S			G	700	1.5	12	2.0	250				
1N2606	S			G	800	1.5	12	2.0	250				
1N2607	S			G	900	1.5	12	2.0	250				
1N2608	S			G	1000	1.5	12	2.0	250				
★1N2609	S	1N4001	1N4001	G	50	1.1	0.75	0.3	30				
★1N2610	S	1N4002	1N4001	G	100	1.1	0.75	0.3	30				
★1N2611	S	1N4003	1N4001	G	200	1.1	0.75	0.3	30				
★1N2612	S	1N4004	1N4001	G	300	1.1	0.75	0.3	30				
★1N2613	S	1N4004	1N4001	G	400	1.1	0.75	0.3	30				
★1N2614	S	1N4005	1N4001	G	500	1.1	0.75	0.3	30				
★1N2615	S	1N4005	1N4001	G	600	1.1	0.75	0.3	30				
★1N2616	S	1N4006	1N4001	G	800	1.1	0.75	0.3	30				
★1N2617	S	1N4007	1N4001	G	1000	1.1	0.75	0.3	30				
1N2618	S			G	1200	1.1	0.75	0.3	30				
1N2619	S			G	1500	1.1	0.75	0.3	30				
★1N2620	S		1N2620	R						9.7	0.01	10	0/75
★1N2620A	S		1N2620	R						9.7	0.01	10	-55/100
★1N2620B	S		1N2620	R						9.7	0.01	10	-55/150
★1N2621	S		1N2620	R						9.7	0.005	10	0/75
★1N2621A	S		1N2620	R						9.7	0.005	10	-55/100
★1N2621B	S		1N2620	R						9.7	0.005	10	-55/150
★1N2622	S		1N2620	R						9.7	0.002	10	0/75
★1N2622A	S		1N2620	R						9.7	0.002	10	-55/100
★1N2622B	S		1N2620	R						9.7	0.002	10	-55/150
★1N2623	S		1N2620	R						9.7	0.001	10	0/75
★1N2623A	S		1N2620	R						9.7	0.001	10	-55/100
★1N2623B	S		1N2620	R						9.7	0.001	10	-55/150
★1N2624	S		1N2620	R						9.7	0.0005	10	0/75
★1N2624A	S		1N2620	R						9.7	0.0005	10	-55/100
★1N2624B	S		1N2620	R						9.7	0.0005	10	-55/150
1N2625	S	1N937	1N935	R						9.7	0.0002	10	0/75
1N2625A	S	1N937A	1N935	R						9.4	0.0002	10	-55/100
1N2625B	S	1N937B	1N935	R						9.4	0.0002	10	-55/150
1N2626	S	1N938	1N935	R						9.4	0.0001	10	0/75
1N2626A	S	1N938A	1N935	R						9.4	0.0001	10	-55/100
1N2626B	S	1N938B	1N935	R						9.4	0.0001	10	-55/150
1N2627			Table 3	V									
1N2628			Table 3	V									
1N2629	G			S	5.0								
1N2630	S			G	1500	2.25	0.085	0.5	5.0				
1N2631	S			G	1600	3.0	0.6	0.5	5.0				
1N2632	S			G	2800	6.0	0.2	0.5	5.0				
1N2633	S			G	1600	3.0	0.6	0.5	5.0				
1N2634	S			G	1600	3.0	0.6	0.5	5.0				
1N2635	S			G	1500	2.25	0.085	0.5	5.0				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N2636	S			G	1500	2.25	0.085	0.5	5.0				
1N2637	S			G		28.0	0.25	0.5	5.0				
1N2638	S			G	100	1.3	1.5	0.3	15				
1N2641	S			G	200	1.3	1.5	0.3	15				
1N2644	S			G	300	1.3	1.5	0.3	15				
1N2647	S			G	400	1.3	1.5	0.3	15				
1N2650	S			G	600	2.6	1.5	0.3	15				
1N2653	S			G	800	2.6	1.5	0.3	15				
1N2656	S			G	1200	3.9	1.5	0.8	15				
1N2659	S			G	1600	5.2	1.5	0.8	15				
1N2662	S			G	2000	6.5	1.5	0.8	15				
1N2664	S			G	2400	7.8	1.5	0.8	15				
1N2666	S			G	3200	10.4	1.5	0.8	15				
1N2667	S			G	4000	13	1.5	0.8	15				
1N2668	S			G	4800	15.6	1.5	0.8	15				
1N2669	S			G	100	1.3	3.6	0.3	15				
1N2673	S			G	200	1.3	3.6	0.3	15				
1N2677	S			G	300	1.3	3.6	0.3	15				
1N2681	S			G	400	1.3	3.6	0.3	15				
1N2685	S			G	600	2.6	3.6	0.3	15				
1N2687	S			G	800	2.6	3.6	0.3	15				
1N2689	S			G	900	3.9	3.6	0.8	15				
1N2690	S			G	1200	3.9	3.6	0.8	15				
1N2691	S			G	1600	5.2	3.6	0.8	15				
1N2692	S			G	100	1.3	7.2	0.3	15				
1N2694	S			G	200	1.3	7.2	0.3	15				
1N2696	S			G	300	1.3	7.2	0.3	15				
1N2698	S			G	400	1.3	7.2	0.3	15				
1N2700	S			G	600	2.6	7.2	0.3	15				
1N2701	S			G	800	2.6	7.2	0.3	15				
1N2702	S			G	100	1.3	3.0	0.2	15				
1N2705	S			G	200	1.3	3.0	0.2	15				
1N2708	S			G	300	1.3	3.0	0.2	15				
1N2711	S			G	400	1.3	3.0	0.2	15				
1N2714	S			G	600	2.6	3.0	0.2	15				
1N2717	S			G	800	2.6	3.0	0.2	15				
1N2720	S			G	1200	3.9	3.0	0.8	15				
1N2722	S			G	1600	5.2	3.0	0.8	15				
1N2723	S			G	2000	6.5	3.0	0.8	15				
1N2724	S			G	2400	7.8	3.0	0.8	15				
1N2725	S			G	100	1.3	3.0	0.3	15				
1N2728	S			G	200	1.3	3.0	0.3	15				
1N2731	S			G	300	1.3	3.0	0.3	15				
1N2734	S			G	400	1.3	3.0	0.3	15				
1N2737	S			G	600	2.6	3.0	0.3	15				
1N2738	S			G	800	2.6	3.0	0.3	15				
1N2739	S			G	1200	3.9	3.0	0.8	15				
1N2740	S			G	100	1.3	3.6	0.3	15				
1N2742	S			G	200	1.3	3.6	0.3	15				
1N2744	S			G	300	1.3	3.6	0.3	15				
1N2746	S			G	400	1.3	3.6	0.3	15				
1N2748	S			G	600	2.6	3.6	0.3	15				
1N2749	S			G	800	2.6	3.6	0.3	15				
1N2750	S			G	100	1.3	3.0	0.3	15				
1N2753	S			G	200	1.3	3.0	0.3	15				
1N2756	S			G	300	1.3	3.0	0.3	15				
1N2759	S			G	400	1.3	3.0	0.3	15				
1N2762	S			G	600	2.6	3.0	0.3	15				
1N2763	S			G	800	2.6	3.0	0.3	15				
1N2764	S			G	1200	3.9	3.0	0.8	15				
1N2765	S	1N823A	1N821	R						6.8	0.005	7.5	-55/100
1N2765A	S	1N825A	1N821	R						6.8	0.0025	7.5	-55/100
1N2766	S	1N1736A	1N429	R						13.6	0.005	7.5	-55/100
1N2766A	S	1N1736A	1N429	R						13.6	0.0025	7.5	-55/100
1N2767	S	1N4061	1N429	R						20.4	0.005	7.5	-55/100
1N2767A	S	1N4061A	1N429	R						20.4	0.0025	7.5	-55/100
1N2768	S	1N4063	1N429	R						27.2	0.005	7.5	-55/100
1N2768A	S	1N4063A	1N429	R						27.2	0.0025	7.5	-55/100
1N2769	S	1N4065	1N429	R						34.0	0.005	7.5	-55/100
1N2769A	S	1N4065A	1N429	R						34.0	0.0025	7.5	-55/100

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} µs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N2770	S	1N4067	1N429	R						40.8	0.005	7.5	-55/100
1N2770A	S	1N4067A	1N429	R						40.8	0.0025	7.5	-55/100
1N2772	S			G	700	1.8	0.5		15				
1N2773	S			G	800	1.8	0.5		15				
1N2774	S			G	900	1.8	0.5		15				
1N2775	S			G	1000	1.8	0.5		15				
1N2776	S			G	1100	1.8	0.5		15				
1N2777	S			G	1200	1.8	0.5		15				
1N2778	S			G	1300	1.8	0.5		15				
1N2779	S			G	1400	1.8	0.5		15				
1N2780	S			G	1500	1.8	0.5		15				
1N2781	S			G	1600	1.8	0.5		15				
1N2782	S			S	5.0			2.0*					
1N2783	S	1N3000A	1N2970	Z						62		10	6.0W
1N2784	S			G	200	1.5	8.0	5.0	200				
1N2785	S			G	400	1.5	8.0	5.0	200				
1N2786	S			G	200	1.2	10	10.0	180				
1N2787	S			G	400	1.2	10	10.0	180				
1N2788	S			G	200	1.3	12.5	5.0	340				
1N2789	S			G	400	1.3	12.5	5.0	340				
1N2790	S	1N3156	1N3154	R						8.5	0.002	10	-55/100
1N2791	S			S		1.3	50m	0.05*	4.0				
1N2793	S	1N1183	1N1183	G	50	1.25	5.0	5.0	75				
1N2794	S	1N1184	1N1183	G	100	1.25	5.0	5.0	75				
1N2795	S	1N1185	1N1183	G	150	1.25	5.0	5.0	75				
1N2796	S	1N1186	1N1183	G	200	1.25	5.0	5.0	75				
1N2797	S	1N1187	1N1183	G	250	1.25	5.0	5.0	75				
1N2798	S	1N1187	1N1183	G	300	1.25	5.0	5.0	75				
1N2799	S	1N1188	1N1183	G	350	1.25	5.0	5.0	75				
1N2800	S	1N1188	1N1183	G	400	1.25	5.0	5.0	75				
1N2801	G			S	20	0.36	5.0m	2.0*	500				
1N2802	S		Table 4	M									
1N2803	S			G	400	1.2	250	36	3500				
★1N2804	S		1N2804	Z						6.8	1850	20	50W
★1N2804A	S		1N2804	Z						6.8	1850	10	50W
★1N2804B	S		1N2804	Z						6.8	1850	5.0	50W
★1N2805	S		1N2804	Z						7.5	1700	20	50W
★1N2805A	S		1N2804	Z						7.5	1700	10	50W
★1N2805B	S		1N2804	Z						7.5	1700	5.0	50W
★1N2806	S		1N2804	Z						8.2	1500	20	50W
★1N2806A	S		1N2804	Z						8.2	1500	10	50W
★1N2806B	S		1N2804	Z						8.2	1500	5.0	50W
★1N2807	S		1N2804	Z						9.1	1370	20	50W
★1N2807A	S		1N2804	Z						9.1	1370	10	50W
★1N2807B	S		1N2804	Z						9.1	1370	5.0	50W
★1N2808	S		1N2804	Z						10	1200	20	50W
★1N2808A	S		1N2804	Z						10	1200	10	50W
★1N2808B	S		1N2804	Z						10	1200	5.0	50W
★1N2809	S		1N2804	Z						11	1100	20	50W
★1N2809A	S		1N2804	Z						11	1100	10	50W
★1N2809B	S		1N2804	Z						11	1100	5.0	50W
★1N2810	S		1N2804	Z						12	1000	20	50W
★1N2810A	S		1N2804	Z						12	1000	10	50W
★1N2810B	S		1N2804	Z						12	1000	5.0	50W
★1N2811	S		1N2804	Z						13	960	20	50W
★1N2811A	S		1N2804	Z						13	960	10	50W
★1N2811B	S		1N2804	Z						13	960	5.0	50W
★1N2812	S		1N2804	Z						14	890	20	50W
★1N2812A	S		1N2804	Z						14	890	10	50W
★1N2812B	S		1N2804	Z						14	890	5.0	50W
★1N2813	S		1N2804	Z						15	830	20	50W
★1N2813A	S		1N2804	Z						15	830	10	50W
★1N2813B	S		1N2804	Z						15	830	5.0	50W
★1N2814	S		1N2804	Z						16	780	20	50W
★1N2814A	S		1N2804	Z						16	780	10	50W
★1N2814B	S		1N2804	Z						16	780	5.0	50W
★1N2815	S		1N2804	Z						17	740	20	50W
★1N2815A	S		1N2804	Z						17	740	10	50W
★1N2815B	S		1N2804	Z						17	740	5.0	50W
★1N2816	S		1N2804	Z						18	700	20	50W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N2816A	S		1N2804	Z						18	700	10	50W
★1N2816B	S		1N2804	Z						18	700	5.0	50W
★1N2817	S		1N2804	Z						19	660	20	50W
★1N2817A	S		1N2804	Z						19	660	10	50W
★1N2817B	S		1N2804	Z						19	660	5.0	50W
★1N2818	S		1N2804	Z						20	630	20	50W
★1N2818A	S		1N2804	Z						20	630	10	50W
★1N2818B	S		1N2804	Z						20	630	5.0	50W
★1N2819	S		1N2804	Z						22	570	20	50W
★1N2819A	S		1N2804	Z						22	570	10	50W
★1N2819B	S		1N2804	Z						22	570	5.0	50W
★1N2820	S		1N2804	Z						24	520	20	50W
★1N2820A	S		1N2804	Z						24	520	10	50W
★1N2820B	S		1N2804	Z						24	520	5.0	50W
★1N2821	S		1N2804	Z						25	500	20	50W
★1N2821A	S		1N2804	Z						25	500	10	50W
★1N2821B	S		1N2804	Z						25	500	5.0	50W
★1N2822	S		1N2804	Z						27	460	20	50W
★1N2822A	S		1N2804	Z						27	460	10	50W
★1N2822B	S		1N2804	Z						27	460	5.0	50W
★1N2823	S		1N2804	Z						30	420	20	50W
★1N2823A	S		1N2804	Z						30	420	10	50W
★1N2823B	S		1N2804	Z						30	420	5.0	50W
★1N2824	S		1N2804	Z						33	380	20	50W
★1N2824A	S		1N2804	Z						33	380	10	50W
★1N2824B	S		1N2804	Z						33	380	5.0	50W
★1N2825	S		1N2804	Z						36	350	20	50W
★1N2825A	S		1N2804	Z						36	350	10	50W
★1N2825B	S		1N2804	Z						36	350	5.0	50W
★1N2826	S		1N2804	Z						39	320	20	50W
★1N2826A	S		1N2804	Z						39	320	10	50W
★1N2826B	S		1N2804	Z						39	320	5.0	50W
★1N2827	S		1N2804	Z						43	290	20	50W
★1N2827A	S		1N2804	Z						43	290	10	50W
★1N2827B	S		1N2804	Z						43	290	5.0	50W
★1N2828	S		1N2804	Z						45	280	20	50W
★1N2828A	S		1N2804	Z						45	280	10	50W
★1N2828B	S		1N2804	Z						45	280	5.0	50W
★1N2829	S		1N2804	Z						47	270	20	50W
★1N2829A	S		1N2804	Z						47	270	10	50W
★1N2829B	S		1N2804	Z						47	270	5.0	50W
★1N2830	S		1N2804	Z						50	250	20	50W
★1N2830A	S		1N2804	Z						50	250	10	50W
★1N2830B	S		1N2804	Z						50	250	5.0	50W
★1N2831	S		1N2804	Z						51	245	20	50W
★1N2831A	S		1N2804	Z						51	245	10	50W
★1N2831B	S		1N2804	Z						51	245	5.0	50W
★1N2832	S		1N2804	Z						56	220	20	50W
★1N2832A	S		1N2804	Z						56	220	10	50W
★1N2832B	S		1N2804	Z						56	220	5.0	50W
★1N2833	S		1N2804	Z						62	200	20	50W
★1N2833A	S		1N2804	Z						62	200	10	50W
★1N2833B	S		1N2804	Z						62	200	5.0	50W
★1N2834	S		1N2804	Z						68	180	20	50W
★1N2834A	S		1N2804	Z						68	180	10	50W
★1N2834B	S		1N2804	Z						68	180	5.0	50W
★1N2835	S		1N2804	Z						75	170	20	50W
★1N2835A	S		1N2804	Z						75	170	10	50W
★1N2835B	S		1N2804	Z						75	170	5.0	50W
★1N2836	S		1N2804	Z						82	150	20	50W
★1N2836A	S		1N2804	Z						82	150	10	50W
★1N2836B	S		1N2804	Z						82	150	5.0	50W
★1N2837	S		1N2804	Z						91	140	20	50W
★1N2837A	S		1N2804	Z						91	140	10	50W
★1N2837B	S		1N2804	Z						91	140	5.0	50W
★1N2838	S		1N2804	Z						100	120	20	50W
★1N2838A	S		1N2804	Z						100	120	10	50W
★1N2838B	S		1N2804	Z						100	120	5.0	50W
★1N2839	S		1N2804	Z						105	120	20	50W
★1N2839A	S		1N2804	Z						105	120	10	50W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N2839B	S		1N2804	Z						105	120	5.0	50W
★1N2840	S		1N2804	Z						110	110	20	50W
★1N2840A	S		1N2804	Z						110	110	10	50W
★1N2840B	S		1N2804	Z						110	110	5.0	50W
★1N2841	S		1N2804	Z						120	100	20	50W
★1N2841A	S		1N2804	Z						120	100	10	50W
★1N2841B	S		1N2804	Z						120	100	5.0	50W
★1N2842	S		1N2804	Z						130	95	20	50W
★1N2842A	S		1N2804	Z						130	95	10	50W
★1N2842B	S		1N2804	Z						130	95	5.0	50W
★1N2843	S		1N2804	Z						140	90	20	50W
★1N2843A	S		1N2804	Z						140	90	10	50W
★1N2843B	S		1N2804	Z						140	90	5.0	50W
★1N2844	S		1N2804	Z						160	80	20	50W
★1N2844A	S		1N2804	Z						160	80	10	50W
★1N2844B	S		1N2804	Z						160	80	5.0	50W
★1N2845	S		1N2804	Z						180	68	20	50W
★1N2845A	S		1N2804	Z						180	68	10	50W
★1N2845B	S		1N2804	Z						180	68	5.0	50W
★1N2846	S		1N2804	Z						200	65	20	50W
★1N2846A	S		1N2804	Z						200	65	10	50W
★1N2846B	S		1N2804	Z						200	65	5.0	50W
1N2847	S			G	100	2.0	1.5	0.3	15				
1N2848	S			G	200	2.0	1.5	0.2	15				
1N2849	S			G	300	2.0	1.5	0.2	15				
1N2850	S			G	400	2.0	1.5	0.2	15				
1N2851	S			G	500	2.0	1.5	0.2	15				
1N2852	S			G	600	2.0	1.5	0.2	15				
1N2855	S			G	600	1.2	250	25	3500				
1N2856	S			G	800	1.2	250	20	4500				
1N2857	S			G	1000	1.2	250	15	4500				
1N2858	S	1N4001	1N4001	G	50	1.2	0.75	0.3	40				
1N2858A	S			G	50	1.2	1.0	0.3	25				
1N2859	S	1N4002	1N4001	G	100	1.2	0.75	0.3	40				
1N2859A	S			G	100	1.2	1.0	0.3	25				
1N2860	S	1N4003	1N4001	G	200	1.2	0.75	0.3	40				
1N2860A	S			G	200	1.2	1.0	0.3	25				
1N2861	S	1N4004	1N4001	G	300	1.2	0.75	0.2	40				
1N2861A	S			G	300	1.2	1.0	0.3	25				
1N2862	S	1N4004	1N4001	G	400	1.2	0.75	0.2	40				
1N2862A	S			G	400	1.2	1.0	0.3	25				
1N2863	S	1N4005	1N4001	G	500	1.2	0.75	0.2	40				
1N2863A	S			G	500	1.2	1.0	0.3	25				
1N2864	S	1N4005	1N4001	G	600	1.2	0.75	0.2	40				
1N2864A	S			G	600	1.2	1.0	0.3	25				
1N2865	S			G	1000	2.5	0.7	0.1	7.0				
1N2866	S			G	1500	2.5	0.7	0.1	7.0				
1N2867	S			G	1000	2.5	0.7	0.1	7.0				
1N2868	S			G	1500	2.5	0.7	0.1	7.0				
1N2878	S	1N4006	1N4001	S	700	2.0	250m	0.5*					
1N2879	S	1N4006	1N4001	S	700	2.0	250m	0.5*					
1N2880	S	1N4007	1N4001	S	1.0k	2.0	250m	0.5*					
1N2881	S	1N4007	1N4001	S	1.0k	2.0	250m	0.5*					
1N2882	S	1N4007	1N4001	S	500	3.0	250m	0.5*					
1N2883	S	1N4007	1N4001	S	500	3.0	250m	0.5*					
1N2884	S	MR991A	MR990A	S	400	4.0	250m	0.5*					
1N2885	S	MR991A	MR990A	S	400	4.0	250m	0.5*					
1N2886	S	MR991A	MR990A	S	500	3.0	250m	0.5*					
1N2887	S	MR991A	MR990A	S	500	3.0	250m	0.5*					
1N2888	S			S	750	5.0	250m	0.5*					
1N2889	S	MR992A	MR990A	S	750	5.0	250m	0.5*					
1N2890	S	MR992A	MR990A	S	2.0k	4.0	250m	0.5*					
1N2891	S	MR992A	MR990A	S	2.0k	4.0	250m	0.5*					
1N2892	S	MR993A	MR990A	S	100	6.0	250m	0.5*					
1N2893	S	MR993A	MR990A	S	100	6.0	250m	0.5*					
1N2894	S	MR994A	MR990A	S	450	7.0	250m	0.5*					
1N2895	S	MR994A	MR990A	S	450	7.0	250m	0.5*					
1N2896	S	MR994A	MR990A	S	500	5.0	250m	0.5*					
1N2897	S	MR994A	MR990A	S	500	5.0	250m	0.5*					
1N2898	S	MR995A	MR990A	S	800	8.0	250m	0.5*					

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N2899	S	MR995A	MR990A	S	800	8.0	250m	0.5*					
1N2900	S	MR995A	MR990A	S	3.0k	6.0	250m	0.5*					
1N2901	S	MR995A	MR990A	S	3.0k	6.0	250m	0.5*					
1N2902	S			S	150	9.0	250m	0.5*					
1N2903	S			S	150	9.0	250m	0.5*					
1N2904	S			S	500	7.0	250m	0.5*					
1N2905	S			S	500	7.0	250m	0.5*					
1N2906	S			S	500	10	250m	0.5*					
1N2907	S			S	500	10	250m	0.5*					
1N2908	S			S	850	11	250m	0.5*					
1N2909	S			S	850	11	250m	0.5*					
1N2910	S			S	4.0k	8.0	250m	0.5*					
1N2911	S			S	4.0k	8.0	250m	0.5*					
1N2912	S			S	200	12	250m	0.5*					
1N2913	S			S	200	12	250m	0.5*					
1N2914	S			S	500	9.0	250m	0.5*					
1N2915	S			S	500	9.0	250m	0.5*					
1N2916	S			S	550	13	250m	0.5*					
1N2917	S			S	550	13	250m	0.5*					
1N2918	S			S	5.0k	10	250m	0.5*					
1N2919	S			S	5.0k	10	250m	0.5*					
1N2920	S			S	500	11	250m	0.5*					
1N2921	S			S	500	11	250m	0.5*					
1N2922	S			S	6.0k	12	250m	0.5*					
1N2923	S			S	6.0k	12	250m	0.5*					
1N2924	S			S	500	13	250m	0.5*					
1N2925	S			S	500	13	250m	0.5*					
1N2926			Table 4	M									
1N2926A			Table 4	M									
1N2927,A				T									
thru	S			T									
1N2934,A				T									
1N2937	S	1N2996A	1N2970	Z						45	25	5.0	10W
1N2938	S			Z						0.9	100	15	2.0W
1N2939,A				T									
thru	G			T									
1N2941,A													
1N2969	G			T									
1N2969A	G			T									
★1N2970	S		1N2970	Z						6.8	370	20	10W
★1N2970A	S		1N2970	Z						6.8	370	10	10W
★1N2970B	S		1N2970	Z						6.8	370	5.0	10W
★1N2971	S		1N2970	Z						7.5	335	20	10W
★1N2971A	S		1N2970	Z						7.5	335	10	10W
★1N2971B	S		1N2970	Z						7.5	335	5.0	10W
★1N2972	S		1N2970	Z						8.2	305	20	10W
★1N2972A	S		1N2970	Z						8.2	305	10	10W
★1N2972B	S		1N2970	Z						8.2	305	5.0	10W
★1N2973	S		1N2970	Z						9.1	275	20	10W
★1N2973A	S		1N2970	Z						9.1	275	10	10W
★1N2973B	S		1N2970	Z						9.1	275	5.0	10W
★1N2974	S		1N2970	Z						10	250	20	10W
★1N2974A	S		1N2970	Z						10	250	10	10W
★1N2974B	S		1N2970	Z						10	250	5.0	10W
★1N2975	S		1N2970	Z						11	230	20	10W
★1N2975A	S		1N2970	Z						11	230	10	10W
★1N2975B	S		1N2970	Z						11	230	5.0	10W
★1N2976	S		1N2970	Z						12	210	20	10W
★1N2976A	S		1N2970	Z						12	210	10	10W
★1N2976B	S		1N2970	Z						12	210	5.0	10W
★1N2977	S		1N2970	Z						13	190	20	10W
★1N2977A	S		1N2970	Z						13	190	10	10W
★1N2977B	S		1N2970	Z						13	190	5.0	10W
★1N2978	S		1N2970	Z						14	180	20	10W
★1N2978A	S		1N2970	Z						14	180	10	10W
★1N2978B	S		1N2970	Z						14	180	5.0	10W
★1N2979	S		1N2970	Z						15	170	20	10W
★1N2979A	S		1N2970	Z						15	170	10	10W
★1N2979B	S		1N2970	Z						15	170	5.0	10W
★1N2980	S		1N2970	Z						16	155	20	10W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES $V_{Z\ Nom}$ Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES $V_{Z\ Nom}$ Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N2980A	S		1N2970	Z						16	155	10	10W
★1N2980B	S		1N2970	Z						16	155	5.0	10W
★1N2981	S		1N2970	Z						17	145	20	10W
★1N2981A	S		1N2970	Z						17	145	10	10W
★1N2981B	S		1N2970	Z						17	145	5.0	10W
★1N2982	S		1N2970	Z						18	140	20	10W
★1N2982A	S		1N2970	Z						18	140	10	10W
★1N2982B	S		1N2970	Z						18	140	5.0	10W
★1N2983	S		1N2970	Z						19	130	20	10W
★1N2983A	S		1N2970	Z						19	130	10	10W
★1N2983B	S		1N2970	Z						19	130	5.0	10W
★1N2984	S		1N2970	Z						20	125	20	10W
★1N2984A	S		1N2970	Z						20	125	10	10W
★1N2984B	S		1N2970	Z						20	125	5.0	10W
★1N2985	S		1N2970	Z						22	115	20	10W
★1N2985A	S		1N2970	Z						22	115	10	10W
★1N2985B	S		1N2970	Z						22	115	5.0	10W
★1N2986	S		1N2970	Z						24	105	20	10W
★1N2986A	S		1N2970	Z						24	105	10	10W
★1N2986B	S		1N2970	Z						24	105	5.0	10W
★1N2987	S		1N2970	Z						25	100	20	10W
★1N2987A	S		1N2970	Z						25	100	10	10W
★1N2987B	S		1N2970	Z						25	100	5.0	10W
★1N2988	S		1N2970	Z						27	95	20	10W
★1N2988A	S		1N2970	Z						27	95	10	10W
★1N2988B	S		1N2970	Z						27	95	5.0	10W
★1N2989	S		1N2970	Z						30	85	20	10W
★1N2989A	S		1N2970	Z						30	85	10	10W
★1N2989B	S		1N2970	Z						30	85	5.0	10W
★1N2990	S		1N2970	Z						33	75	20	10W
★1N2990A	S		1N2970	Z						33	75	10	10W
★1N2990B	S		1N2970	Z						33	75	5.0	10W
★1N2991	S		1N2970	Z						36	70	20	10W
★1N2991A	S		1N2970	Z						36	70	10	10W
★1N2991B	S		1N2970	Z						36	70	5.0	10W
★1N2992	S		1N2970	Z						39	65	20	10W
★1N2992A	S		1N2970	Z						39	65	10	10W
★1N2992B	S		1N2970	Z						39	65	5.0	10W
★1N2993	S		1N2970	Z						43	60	20	10W
★1N2993A	S		1N2970	Z						43	60	10	10W
★1N2993B	S		1N2970	Z						43	60	5.0	10W
★1N2994	S		1N2970	Z						45	55	20	10W
★1N2994A	S		1N2970	Z						45	55	10	10W
★1N2994B	S		1N2970	Z						45	55	5.0	10W
★1N2995	S		1N2970	Z						47	55	20	10W
★1N2995A	S		1N2970	Z						47	55	10	10W
★1N2995B	S		1N2970	Z						47	55	5.0	10W
★1N2996	S		1N2970	Z						50	50	20	10W
★1N2996A	S		1N2970	Z						50	50	10	10W
★1N2996B	S		1N2970	Z						50	50	5.0	10W
★1N2997	S		1N2970	Z						51	50	20	10W
★1N2997A	S		1N2970	Z						51	50	10	10W
★1N2997B	S		1N2970	Z						51	50	5.0	10W
★1N2998	S		1N2970	Z						52	50	20	10W
★1N2998A	S		1N2970	Z						52	50	10	10W
★1N2998B	S		1N2970	Z						52	50	5.0	10W
★1N2999	S		1N2970	Z						56	45	20	10W
★1N2999A	S		1N2970	Z						56	45	10	10W
★1N2999B	S		1N2970	Z						56	45	5.0	10W
★1N3000	S		1N2970	Z						62	40	20	10W
★1N3000A	S		1N2970	Z						62	40	10	10W
★1N3000B	S		1N2970	Z						62	40	5.0	10W
★1N3001	S		1N2970	Z						68	37	20	10W
★1N3001A	S		1N2970	Z						68	37	10	10W
★1N3001B	S		1N2970	Z						68	37	5.0	10W
★1N3002	S		1N2970	Z						75	33	20	10W
★1N3002A	S		1N2970	Z						75	33	10	10W
★1N3002B	S		1N2970	Z						75	33	5.0	10W
★1N3003	S		1N2970	Z						82	30	20	10W
★1N3003A	S		1N2970	Z						82	30	10	10W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N3003B	S		1N2970	Z						82	30	5.0	10W
★1N3004	S		1N2970	Z						91	28	20	10W
★1N3004A	S		1N2970	Z						91	28	10	10W
★1N3004B	S		1N2970	Z						91	28	5.0	10W
★1N3005	S		1N2970	Z						100	25	20	10W
★1N3005A	S		1N2970	Z						100	25	10	10W
★1N3005B	S		1N2970	Z						100	25	5.0	10W
★1N3006	S		1N2970	Z						105	25	20	10W
★1N3006A	S		1N2970	Z						105	25	10	10W
★1N3006B	S		1N2970	Z						105	25	5.0	10W
★1N3007	S		1N2970	Z						110	23	20	10W
★1N3007A	S		1N2970	Z						110	23	10	10W
★1N3007B	S		1N2970	Z						110	23	5.0	10W
★1N3008	S		1N2970	Z						120	20	20	10W
★1N3008A	S		1N2970	Z						120	20	10	10W
★1N3008B	S		1N2970	Z						120	20	5.0	10W
★1N3009	S		1N2970	Z						130	19	20	10W
★1N3009A	S		1N2970	Z						130	19	10	10W
★1N3009B	S		1N2970	Z						130	19	5.0	10W
★1N3010	S		1N2970	Z						140	18	20	10W
★1N3010A	S		1N2970	Z						140	18	10	10W
★1N3010B	S		1N2970	Z						140	18	5.0	10W
★1N3011	S		1N2970	Z						150	17	20	10W
★1N3011A	S		1N2970	Z						150	17	10	10W
★1N3011B	S		1N2970	Z						150	17	5.0	10W
★1N3012	S		1N2970	Z						160	16	20	10W
★1N3012A	S		1N2970	Z						160	16	10	10W
★1N3012B	S		1N2970	Z						160	16	5.0	10W
★1N3013	S		1N2970	Z						175	14	20	10W
★1N3013A	S		1N2970	Z						175	14	10	10W
★1N3013B	S		1N2970	Z						175	14	5.0	10W
★1N3014	S		1N2970	Z						180	14	20	10W
★1N3014A	S		1N2970	Z						180	14	10	10W
★1N3014B	S		1N2970	Z						180	14	5.0	10W
★1N3015	S		1N2970	Z						200	12	20	10W
★1N3015A	S		1N2970	Z						200	12	10	10W
★1N3015B	S		1N2970	Z						200	12	5.0	10W
★1N3016	S		1N3821	Z						6.8	37	20	1.0W
★1N3016A	S		1N3821	Z						6.8	37	10	1.0W
★1N3016B	S		1N3821	Z						6.8	37	5.0	1.0W
★1N3017	S		1N3821	Z						7.5	34	20	1.0W
★1N3017A	S		1N3821	Z						7.5	34	10	1.0W
★1N3017B	S		1N3821	Z						7.5	34	5.0	1.0W
★1N3018	S		1N3821	Z						8.2	31	20	1.0W
★1N3018A	S		1N3821	Z						8.2	31	10	1.0W
★1N3018B	S		1N3821	Z						8.2	31	5.0	1.0W
★1N3019	S		1N3821	Z						9.1	28	20	1.0W
★1N3019A	S		1N3821	Z						9.1	28	10	1.0W
★1N3019B	S		1N3821	Z						9.1	28	5.0	1.0W
★1N3020	S		1N3821	Z						10	25	20	1.0W
★1N3020A	S		1N3821	Z						10	25	10	1.0W
★1N3020B	S		1N3821	Z						10	25	5.0	1.0W
★1N3021	S		1N3821	Z						11	23	20	1.0W
★1N3021A	S		1N3821	Z						11	23	10	1.0W
★1N3021B	S		1N3821	Z						11	23	5.0	1.0W
★1N3022	S		1N3821	Z						12	21	20	1.0W
★1N3022A	S		1N3821	Z						12	21	10	1.0W
★1N3022B	S		1N3821	Z						12	21	5.0	1.0W
★1N3023	S		1N3821	Z						13	19	20	1.0W
★1N3023A	S		1N3821	Z						13	19	10	1.0W
★1N3023B	S		1N3821	Z						13	19	5.0	1.0W
★1N3024	S		1N3821	Z						15	17	20	1.0W
★1N3024A	S		1N3821	Z						15	17	10	1.0W
★1N3024B	S		1N3821	Z						15	17	5.0	1.0W
★1N3025	S		1N3821	Z						16	15.5	20	1.0W
★1N3025A	S		1N3821	Z						16	15.5	10	1.0W
★1N3025B	S		1N3821	Z						16	15.5	5.0	1.0W
★1N3026	S		1N3821	Z						18	14	20	1.0W
★1N3026A	S		1N3821	Z						18	14	10	1.0W
★1N3026B	S		1N3821	Z						18	14	5.0	1.0W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N3027	S		1N3821	Z						20	12.5	20	1.0W
★1N3027A	S		1N3821	Z						20	12.5	10	1.0W
★1N3027B	S		1N3821	Z						20	12.5	5.0	1.0W
★1N3028	S		1N3821	Z						22	11.5	20	1.0W
★1N3028A	S		1N3821	Z						22	11.5	10	1.0W
★1N3028B	S		1N3821	Z						22	11.5	5.0	1.0W
★1N3029	S		1N3821	Z						24	10.5	20	1.0W
★1N3029A	S		1N3821	Z						24	10.5	10	1.0W
★1N3029B	S		1N3821	Z						24	10.5	5.0	1.0W
★1N3030	S		1N3821	Z						27	9.5	20	1.0W
★1N3030A	S		1N3821	Z						27	9.5	10	1.0W
★1N3030B	S		1N3821	Z						27	9.5	5.0	1.0W
★1N3031	S		1N3821	Z						30	8.5	20	1.0W
★1N3031A	S		1N3821	Z						30	8.5	10	1.0W
★1N3031B	S		1N3821	Z						30	8.5	5.0	1.0W
★1N3032	S		1N3821	Z						33	7.5	20	1.0W
★1N3032A	S		1N3821	Z						33	7.5	10	1.0W
★1N3032B	S		1N3821	Z						33	7.5	5.0	1.0W
★1N3033	S		1N3821	Z						36	7.0	20	1.0W
★1N3033A	S		1N3821	Z						36	7.0	10	1.0W
★1N3033B	S		1N3821	Z						36	7.0	5.0	1.0W
★1N3034	S		1N3821	Z						39	6.5	20	1.0W
★1N3034A	S		1N3821	Z						39	6.5	10	1.0W
★1N3034B	S		1N3821	Z						39	6.5	5.0	1.0W
★1N3035	S		1N3821	Z						43	6.0	20	1.0W
★1N3035A	S		1N3821	Z						43	6.0	10	1.0W
★1N3035B	S		1N3821	Z						43	6.0	5.0	1.0W
★1N3036	S		1N3821	Z						47	5.5	20	1.0W
★1N3036A	S		1N3821	Z						47	5.5	10	1.0W
★1N3036B	S		1N3821	Z						47	5.5	5.0	1.0W
★1N3037	S		1N3821	Z						51	5.0	20	1.0W
★1N3037A	S		1N3821	Z						51	5.0	10	1.0W
★1N3037B	S		1N3821	Z						51	5.0	5.0	1.0W
★1N3038	S		1N3821	Z						56	4.5	20	1.0W
★1N3038A	S		1N3821	Z						56	4.5	10	1.0W
★1N3038B	S		1N3821	Z						56	4.5	5.0	1.0W
★1N3039	S		1N3821	Z						62	4.0	20	1.0W
★1N3039A	S		1N3821	Z						62	4.0	10	1.0W
★1N3039B	S		1N3821	Z						62	4.0	5.0	1.0W
★1N3040	S		1N3821	Z						68	3.7	20	1.0W
★1N3040A	S		1N3821	Z						68	3.7	10	1.0W
★1N3040B	S		1N3821	Z						68	3.7	5.0	1.0W
★1N3041	S		1N3821	Z						75	3.3	20	1.0W
★1N3041A	S		1N3821	Z						75	3.3	10	1.0W
★1N3041B	S		1N3821	Z						75	3.3	5.0	1.0W
★1N3042	S		1N3821	Z						82	3.0	20	1.0W
★1N3042A	S		1N3821	Z						82	3.0	10	1.0W
★1N3042B	S		1N3821	Z						82	3.0	5.0	1.0W
★1N3043	S		1N3821	Z						91	2.8	20	1.0W
★1N3043A	S		1N3821	Z						91	2.8	10	1.0W
★1N3043B	S		1N3821	Z						91	2.8	5.0	1.0W
★1N3044	S		1N3821	Z						100	2.5	20	1.0W
★1N3044A	S		1N3821	Z						100	2.5	10	1.0W
★1N3044B	S		1N3821	Z						100	2.5	5.0	1.0W
★1N3045	S		1N3821	Z						110	2.3	20	1.0W
★1N3045A	S		1N3821	Z						110	2.3	10	1.0W
★1N3045B	S		1N3821	Z						110	2.3	5.0	1.0W
★1N3046	S		1N3821	Z						120	2.0	20	1.0W
★1N3046A	S		1N3821	Z						120	2.0	10	1.0W
★1N3046B	S		1N3821	Z						120	2.0	5.0	1.0W
★1N3047	S		1N3821	Z						130	1.9	20	1.0W
★1N3047A	S		1N3821	Z						130	1.9	10	1.0W
★1N3047B	S		1N3821	Z						130	1.9	5.0	1.0W
★1N3048	S		1N3821	Z						150	1.7	20	1.0W
★1N3048A	S		1N3821	Z						150	1.7	10	1.0W
★1N3048B	S		1N3821	Z						150	1.7	5.0	1.0W
★1N3049	S		1N3821	Z						160	1.6	20	1.0W
★1N3049A	S		1N3821	Z						160	1.6	10	1.0W
★1N3049B	S		1N3821	Z						160	1.6	5.0	1.0W
★1N3050	S		1N3821	Z						180	1.4	20	1.0W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N3050A	S		1N3821	Z						180	1.4	10	1.0W
★1N3050B	S		1N3821	Z						180	1.4	5.0	1.0W
★1N3051	S		1N3821	Z						200	1.2	20	1.0W
★1N3051A	S		1N3821	Z							1.2	10	1.0W
★1N3051B	S		1N3821	Z							1.2	5.0	1.0W
1N3052	S			G	12k	70	0.1	0.2	6.0				
1N3053	S			G	14k	75	0.1	0.2	6.0				
1N3054	S			G	16k	80	0.1	0.2	6.0				
1N3055	S			G	18k	85	0.1	0.2	6.0				
1N3056	S			G	20k	90	0.1	0.2	6.0				
1N3057	S			G	22k	95	0.1	0.2	6.0				
1N3058	S			G	24k	100	0.1	0.2	6.0				
1N3059	S			G	26k	105	0.1	0.2	6.0				
1N3060	S			G	28k	120	0.1	0.2	6.0				
1N3061	S			G	30k	125	0.1	0.2	6.0				
1N3062	S			S	75	1.0	20m	0.1*	2.0				
1N3063	S			S	75	0.85	10m	0.1*	2.0				
1N3064	S			S	75	1.0	10m	0.1*	4.0				
1N3065	S			S	75	1.0	20m	0.1*	2.0				
1N3066	S			S	75	1.0	10m	0.1*	2.0				
1N3067	S			S	30	1.0	5.0m	0.1*	2.0				
1N3068	S			S	30	1.0	5.0m	0.1*	50				
1N3069	S			S	65	1.0	50m	0.1*	50				
1N3070	S			S	200	1.0	100m	0.1*	50				
1N3071	S			S	200	1.0	100m	0.1*	50				
1N3072	S	1N4001	1N4001	G	50	1.5	0.2	0.5	10				
1N3073	S	1N4002	1N4001	G	100	1.5	0.2	0.5	10				
1N3074	S	1N4003	1N4001	G	150	1.5	0.2	0.5	10				
1N3075	S	1N4003	1N4001	G	200	1.5	0.2	0.5	10				
1N3076	S	1N4004	1N4001	G	250	1.5	0.2	0.5	10				
1N3077	S	1N4004	1N4001	G	300	1.5	0.2	0.5	10				
1N3078	S	1N4004	1N4001	G	350	1.5	0.2	0.5	10				
1N3079	S	1N4004	1N4001	G	400	1.5	0.2	0.5	10				
1N3080	S	1N4005	1N4001	G	500	1.5	0.2	0.5	10				
1N3081	S	1N4005	1N4001	G	600	1.5	0.2	0.5	10				
1N3082	S	1N4003	1N4001	G	200	1.25	0.5	0.2	15				
1N3083	S	1N4004	1N4001	G	400	1.25	0.5	0.2	15				
1N3084	S	1N4005	1N4001	G	600	1.25	0.5	0.2	15				
1N3085	S	MR1121SB	MR1220	G	100	1.1	150	40	1500				
1N3086	S	MR1223SB	MR1220	G	200	1.1	150	40	1500				
1N3087	S	MR1225SB	MR1200	G	300	1.1	150	40	1500				
1N3088	S	MR1227SB	MR1200	G	400	1.1	150	40	1500				
1N3089	S	MR1228SB	MR1200	G	500	1.1	150	40	1500				
1N3090	S	MR1229SB	MR1220	G	600	1.1	150	40	1500				
1N3091	S			G	800	1.1	150	40	1500				
1N3092	S			G	1000	1.1	150	40	1500				
1N3093	G		Table 4	M									
1N3097	G		1N3016	S	30	0.5	10m	4.0*	0.5				
1N3098,A	S	1N3046A		Z						120	3.0	20/10	1.0W
1N3099,A	S	1N3048A		Z						150	3.0	20/10	1.0W
1N3100,A	S	1N3050A		Z						180	3.0	20/10	1.0W
1N3101,A	S	1N3051A		Z						220	3.0	20/10	1.0W
1N3102,A	S	1N3008A	1N2970	Z						120	3.0	20/10	10W
1N3103,A	S	1N3011A	1N2970	Z						150	3.0		10W
1N3104,A	S	1N3014A	1N2970	Z						180	3.0		10W
1N3105,A	S	1N3015A	1N2970	Z						220	3.0		10W
1N3106	S			G	800	1.6	0.75	0.3	30				
1N3107	S			G	1200	3.2	0.5	0.3	15				
1N3108	S			G	800	1.6	1.5	0.3	30				
1N3109	S			G	1200	3.2	0.7	0.3	15				
1N3110	G			S	8.0	0.45	5.0m	20*					
1N3111	S	MR1220SB	MR1220	G	50	1.1	150	40	1500				
1N3112	S	1N4737A	1N4728	Z						7.4	120	5.0	1.0W
1N3113 thru	A			T									
1N3120				T									
1N3121	G			S	50	0.25	0.1m	3.5*	0.5				
1N3122	G			S	20	0.3	1.0m	4.5*					
1N3123	S			S	40	1.5	10m	0.1*	4.0				
1N3124	S			S	40	1.0	20m	0.1*	4.0				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} µs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N3125	G			S	40	0.4	5.0m	100*	0.3				
1N3128 thru 1N3130	G			T									
1N3138	A			T									
1N3139	S			G	50	1.55	70	15	1200				
1N3140	S			G	100	1.55	70	15	1200				
1N3141	S			G	150	1.55	70	15	1200				
1N3142	S			G	200	1.55	70	15	1200				
1N3143	G		Table 4	M									
1N3144	G			S	20	0.3	1.0m	20*	0.5				
1N3145	G			S	65	0.45	10m	25*					
1N3146	G			S	20	1.0	50m	100*	2.0				
1N3147	S			S	45	1.0	100m		1.0				
1N3148	S	1N3155A	1N3154	R						8.5	0.005	10	-55/100
1N3149	G			T									
1N3149A	G			T									
1N3150	G			T									
1N3151	S			G	7200	27	0.1	250	12				
★1N3154	S		1N3154	R						8.8	0.01	10	-55/100
★1N3154A	S		1N3154	R						8.8	0.01	10	-55/100
★1N3155	S		1N3154	R						8.8	0.005	10	-55/100
★1N3155A	S		1N3154	R						8.8	0.005	10	-55/100
★1N3156	S		1N3154	R						8.8	0.002	10	-55/100
★1N3156A	S		1N3154	R						8.8	0.002	10	-55/100
★1N3157	S		1N3154	R						8.8	0.001	10	-55/100
★1N3157A	S		1N3154	R						8.8	0.001	10	-55/100
1N3159	G			S	15	0.45	10m		0.3				
1N3160	G			S	60	1.0	5.0m	12*					
1N3161	S	MR1230SB	MR1230	G	50	1.30	240	16	3000				
1N3162	S	MR1231SB	MR1230	G	100	1.30	240	16	3000				
1N3163	S	MR1232SB	MR1230	G	150	1.30	240	16	3000				
1N3164	S	MR1233SB	MR1230	G	200	1.30	240	16	3000				
1N3165	S	MR1234SB	MR1230	G	250	1.30	240	16	3000				
1N3166	S	MR1235SB	MR1230	G	300	1.30	240	16	3000				
1N3167	S	MR1236SB	MR1230	G	350	1.30	240	16	3000				
1N3168	S	MR1237SB	MR1230	G	400	1.30	240	16	3000				
1N3169	S	MR1238SB	MR1230	G	500	1.30	240	16	3000				
1N3170	S	MR1239SB	MR1230	G	600	1.30	240	16	3000				
1N3171	S			G	700	1.92	240	16	3000				
1N3171A	S			G	700	1.9	240	16	3000				
1N3172	S			G	800	1.92	240	16	3000				
1N3172A	S			G	800	1.9	240	16	3000				
1N3173	S			G	900	1.92	240	16	3000				
1N3173A	S			G	900	1.9	240	16	3000				
1N3174	S			G	1000	1.92	240	16	3000				
1N3174A	S			G	1000	1.9	240	16	3000				
1N3175	S			G	1200	1.4	240	15	3000				
1N3176	S			G	1400	1.4	240	15	3000				
1N3177	S			G	1600	1.4	240	15	3000				
1N3179	S			S	200	1.0	100m	10*					
1N3180	S			S	110	1.5	500m	5.0*					
1N3181	S	1N5237A	1N5221	Z						7.7	14	10	0.6W
1N3182			Table 3	V									
1N3183	S			G	350	1.0	0.5		4.0				
1N3184	S			G	500	1.0	0.5		4.0				
1N3185	S			G	700	2.0	0.5		4.0				
1N3186	S			G	1000	2.0	0.5		4.0				
1N3187	S			G	1500	3.0	0.5		4.0				
1N3188	S			G	2000	4.0	0.5		4.0				
1N3189	S	1N4003	1N4001	G	200	1.1	1.0	0.2	30				
1N3190	S	1N4004	1N4001	G	400	1.1	1.0	0.2	30				
1N3191	S	1N4005	1N4001	G	600	1.1	1.0	0.2	30				
1N3192	S			S	200	1.0	100m	10*					
1N3193	S	1N4003	1N4001	G	200	1.2	0.75	0.2	40				
1N3194	S	1N4004	1N4001	G	400	1.2	0.75	0.2	40				
1N3195	S	1N4005	1N4001	G	600	1.2	0.75	0.2	40				
1N3196	S	1N4006	1N4001	G	800	1.2	0.75	0.2	40				
1N3197	G			S	30	1.0	150m	50*	0.3				
1N3198	S	1N5221B	1N5221	Z						2.25	10	2.0	0.4W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N3199	S	1N3155	1N3154	R						8.8	0.005	10	50/100
1N3200	S	1N3156	1N3154	R						8.8	0.003	10	50/100
1N3201	S	1N3156	1N3154	R						8.8	0.002	10	50/100
1N3202	S	1N3157	1N3154	R						8.8	0.001	10	50/100
1N3203	G			S	25	0.5	35m	50*	0.3				
1N3206	S			S	80	1.0	10m	5.0*	4.0				
1N3207	S			S	50	1.0	150m	0.05*	6.0				
★1N3208	S		1N3208	G	50	1.5	15	10	250				
★1N3209	S		1N3208	G	100	1.5	15	10	250				
★1N3210	S		1N3208	G	200	1.5	15	10	250				
★1N3211	S		1N3208	G	300	1.5	15	10	250				
★1N3212	S		1N3208	G	400	1.5	15	10	250				
★1N3213	S		1N248B	G	500	1.5	15	10	250				
★1N3214	S		1N248B	G	600	1.5	15	10	250				
1N3215	S			S	80	0.7	1.0m	10*	0.25				
1N3217 thru 1N3222	G			T									
1N3223	S			S	150	1.5	4.0m	20*	800				
1N3225	G			S	40	1.0	5.0m	33*	0.5				
1N3227	S	1N4002	1N4001	G	100	3.3	0.5	0.250	12.5				
1N3228	S	1N4003	1N4001	G	200	3.3	0.5	0.250	12.5				
1N3229	S	1N4004	1N4001	G	400	3.3	0.5	0.250	12.5				
1N3230	S	1N4005	1N4001	G	600	3.3	0.5	0.250	12.5				
1N3231	S	1N4006	1N4001	G	800	3.3	0.5	0.250	12.5				
1N3232	S	1N4007	1N4001	G	1000	3.3	0.5	0.250	12.5				
1N3233	S			G	1200	3.3	0.5	0.250	12.5				
1N3234	S			G	1500	3.3	0.5	0.250	12.5				
1N3235	S			G	1800	3.3	0.5	0.250	12.5				
1N3236	S			G	2000	3.3	0.5	0.250	12.5				
1N3237	S	1N4001	1N4001	G	50	2.2	0.75	0.250	15.0				
1N3238	S	1N4002	1N4001	G	100	2.2	0.75	0.250	15.0				
1N3239	S	1N4003	1N4001	G	200	2.2	0.75	0.250	15.0				
1N3240	S	1N4004	1N4001	G	400	2.2	0.75	0.250	15.0				
1N3241	S	1N4005	1N4001	G	600	2.2	0.75	0.250	15.0				
1N3242	S	1N4006	1N4001	G	800	2.2	0.75	0.250	15.0				
1N3243	S	1N4007	1N4001	G	1000	2.2	0.75	0.250	15.0				
1N3244	S			G	1200	2.2	0.75	0.250	15.0				
1N3245	S			G	1500	2.2	0.75	0.250	15.0				
1N3246	S	1N4001	1N4001	G	50	1.1	1.0	0.250	20.0				
1N3247	S	1N4002	1N4001	G	100	1.1	1.0	0.250	20.0				
1N3248	S	1N4003	1N4001	G	200	1.1	1.0	0.250	20.0				
1N3249	S	1N4004	1N4001	G	400	1.1	1.0	0.250	20.0				
1N3250	S	1N4005	1N4001	G	600	1.1	1.0	0.250	20.0				
1N3251	S	1N4006	1N4001	G	800	1.1	1.0	0.250	20.0				
1N3252	S	1N4007	1N4001	G	1000	1.1	1.0	0.250	20.0				
1N3253	S	1N4003	1N4001	G	200	1.2	0.75	0.2	40				
1N3254	S	1N4004	1N4001	G	400	1.2	0.75	0.2	40				
1N3255	S	1N4005	1N4001	G	600	1.2	0.75	0.2	40				
1N3256	S	1N4006	1N4001	G	800	1.2	0.5	0.2	40				
1N3257	S			S	80	1.0	30m	0.025*	300				
1N3258	S			S	80	1.0	100m	0.025*	400				
1N3260	S	MR1220SB	MR1220	G	50	1.6	160	12	2000				
1N3261	S	MR1221SB	MR1220	G	100	1.6	160	12	2000				
1N3262	S	MR1222SB	MR1220	G	150	1.6	160	12	2000				
1N3263	S	MR1223SB	MR1220	G	200	1.6	160	12	2000				
1N3264	S	MR1224SB	MR1220	G	250	1.6	160	12	2000				
1N3265	S	MR1225SB	MR1220	G	300	1.6	160	12	2000				
1N3266	S	MR1226SB	MR1220	G	350	1.6	160	12	2000				
1N3267	S	MR1227SB	MR1220	G	400	1.6	160	12	2000				
1N3268	S	MR1228SB	MR1220	G	500	1.6	160	12	2000				
1N3269	S	MR1229SB	MR1220	G	600	1.6	160	12	2000				
1N3270	S			G	700	1.6	160	12	2000				
1N3271	S			G	800	1.6	160	12	2000				
1N3272	S			G	900	1.6	160	12	2000				
1N3273	S			G	1000	1.6	160	12	2000				
1N3274	S			G	1200	1.4	160	12	2000				
1N3275	S			G	1400	1.4	160	12	2000				
1N3276	S			G	1600	1.4	160	12	2000				
1N3277	S			G	200	1.3	0.75		25				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N3278	S			G	400	1.3	0.75		25				
1N3279	S			G	600	1.3	0.75		25				
1N3280	S			G	800	1.3	0.75		25				
1N3281	S			G	1000	1.3	0.75		25				
1N3282	S		1N3213	G	1000	3.7	0.1		2.5				
1N3283	S		1N3213	G	1500	3.7	0.1		2.5				
1N3284	S		1N3213	G	2000	3.7	0.1		2.5				
1N3285	S		1N3213	G	2500	3.7	0.1		2.5				
1N3286	S		1N3213	G	3000	3.7	0.1		2.5				
1N3287	G			S	6.0	0.312	1.0m	15*					
1N3288	S			G	100	1.5	100	200	1600				
1N3288A	S	MR1811R		G	100	1.5	100	24	2300				
1N3289	S			G	200	1.5	100	300	1600				
1N3289A	S	MR1813R		G	200	1.5	100	24	2300				
1N3290	S			G	300	1.5	100	400	1600				
1N3290A	S	MR1815R		G	300	1.5	100	24	2300				
1N3291	S			G	400	1.5	100	525	1600				
1N3291A	S	MR1817R		G	400	1.5	100	24	2300				
1N3292	S			G	500	1.5	100	650	1600				
1N3292A	S			G	500	1.5	100	21	1600				
1N3292B	S	MR1818SB		G	500	1.5	100	21	2300				
1N3293	S			G	600	1.5	100	800	1600				
1N3293A	S	MR1819SB		G	600	1.5	100	17	2300				
1N3294	S			G	800	1.5	100	1050	1600				
1N3294A	S			G	800	1.5	100	13	2300				
1N3295	S			G	1000	1.5	100	1300	1600				
1N3295A	S			G	1000	1.5	100	11	2300				
1N3296	S			G	1200	1.5	100	1600	1600				
1N3296A	S			G	1200	1.5	100	9.0	2300				
1N3297	S			G	1400	1.5	100	1800	1600				
1N3297A	S			G	1400	1.5	100	7.0	2300				
1N3298	S			S	70	0.9	500m	0.2*	20				
1N3298A	S			S	70	0.9	0.5	0.2*					
1N3299 thru			Table 6										
1N3304,A			Table 6										
★1N3305	S		1N2804	Z						6.8	1850	20	50W
★1N3305A	S		1N2804	Z						6.8	1850	10	50W
★1N3305B	S		1N2804	Z						6.8	1850	5.0	50W
★1N3306	S		1N2804	Z						7.5	1700	20	50W
★1N3306A	S		1N2804	Z						7.5	1700	10	50W
★1N3306B	S		1N2804	Z						7.5	1700	5.0	50W
★1N3307	S		1N2804	Z						8.2	1500	20	50W
★1N3307A	S		1N2804	Z						8.2	1500	10	50W
★1N3307B	S		1N2804	Z						8.2	1500	5.0	50W
★1N3308	S		1N2804	Z						9.1	1370	20	50W
★1N3308A	S		1N2804	Z						9.1	1370	10	50W
★1N3308B	S		1N2804	Z						9.1	1370	5.0	50W
★1N3309	S		1N2804	Z						10	1200	20	50W
★1N3309A	S		1N2804	Z						10	1200	10	50W
★1N3309B	S		1N2804	Z						10	1200	5.0	50W
★1N3310	S		1N2804	Z						11	1100	20	50W
★1N3310A	S		1N2804	Z						11	1100	10	50W
★1N3310B	S		1N2804	Z						11	1100	5.0	50W
★1N3311	S		1N2804	Z						12	1000	20	50W
★1N3311A	S		1N2804	Z						12	1000	10	50W
★1N3311B	S		1N2804	Z						12	1000	5.0	50W
★1N3312	S		1N2804	Z						13	960	20	50W
★1N3312A	S		1N2804	Z						13	960	10	50W
★1N3312B	S		1N2804	Z						13	960	5.0	50W
★1N3313	S		1N2804	Z						14	890	20	50W
★1N3313A	S		1N2804	Z						14	890	10	50W
★1N3313B	S		1N2804	Z						14	890	5.0	50W
★1N3314	S		1N2804	Z						15	830	20	50W
★1N3314A	S		1N2804	Z						15	830	10	50W
★1N3314B	S		1N2804	Z						15	830	5.0	50W
★1N3315	S		1N2804	Z						16	780	20	50W
★1N3315A	S		1N2804	Z						16	780	10	50W
★1N3315B	S		1N2804	Z						16	780	5.0	50W
★1N3316	S		1N2804	Z						17	740	20	50W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N3316A	S		1N2804	Z						17	740	10	50W
★1N3316B	S		1N2804	Z						17	740	5.0	50W
★1N3317	S		1N2804	Z						18	700	20	50W
★1N3317A	S		1N2804	Z						18	700	10	50W
★1N3317B	S		1N2804	Z						18	700	5.0	50W
★1N3318	S		1N2804	Z						19	660	20	50W
★1N3318A	S		1N2804	Z						19	660	10	50W
★1N3318B	S		1N2804	Z						19	660	5.0	50W
★1N3319	S		1N2804	Z						20	630	20	50W
★1N3319A	S		1N2804	Z						20	630	10	50W
★1N3319B	S		1N2804	Z						20	630	5.0	50W
★1N3320	S		1N2804	Z						22	570	20	50W
★1N3320A	S		1N2804	Z						22	570	10	50W
★1N3320B	S		1N2804	Z						22	570	5.0	50W
★1N3321	S		1N2804	Z						24	520	20	50W
★1N3321A	S		1N2804	Z						24	520	10	50W
★1N3321B	S		1N2804	Z						24	520	5.0	50W
★1N3322	S		1N2804	Z						25	500	20	50W
★1N3322A	S		1N2804	Z						25	500	10	50W
★1N3322B	S		1N2804	Z						25	500	5.0	50W
★1N3323	S		1N2804	Z						27	460	20	50W
★1N3323A	S		1N2804	Z						27	460	10	50W
★1N3323B	S		1N2804	Z						27	460	5.0	50W
★1N3324	S		1N2804	Z						30	420	20	50W
★1N3324A	S		1N2804	Z						30	420	10	50W
★1N3324B	S		1N2804	Z						30	420	5.0	50W
★1N3325	S		1N2804	Z						33	380	20	50W
★1N3325A	S		1N2804	Z						33	380	10	50W
★1N3325B	S		1N2804	Z						33	380	5.0	50W
★1N3326	S		1N2804	Z						36	350	20	50W
★1N3326A	S		1N2804	Z						36	350	10	50W
★1N3326B	S		1N2804	Z						36	350	5.0	50W
★1N3327	S		1N2804	Z						39	320	20	50W
★1N3327A	S		1N2804	Z						39	320	10	50W
★1N3327B	S		1N2804	Z						39	320	5.0	50W
★1N3328	S		1N2804	Z						43	290	20	50W
★1N3328A	S		1N2804	Z						43	290	10	50W
★1N3328B	S		1N2804	Z						43	290	5.0	50W
★1N3329	S		1N2804	Z						45	280	20	50W
★1N3329A	S		1N2804	Z						45	280	10	50W
★1N3329B	S		1N2804	Z						45	280	5.0	50W
★1N3330	S		1N2804	Z						47	270	20	50W
★1N3330A	S		1N2804	Z						47	270	10	50W
★1N3330B	S		1N2804	Z						47	270	5.0	50W
★1N3331	S		1N2804	Z						50	250	20	50W
★1N3331A	S		1N2804	Z						50	250	10	50W
★1N3331B	S		1N2804	Z						50	250	5.0	50W
★1N3332	S		1N2804	Z						51	245	20	50W
★1N3332A	S		1N2804	Z						51	245	10	50W
★1N3332B	S		1N2804	Z						51	245	5.0	50W
★1N3333	S		1N2804	Z						52	240	20	50W
★1N3333A	S		1N2804	Z						52	240	10	50W
★1N3333B	S		1N2804	Z						52	240	5.0	50W
★1N3334	S		1N2804	Z						56	220	20	50W
★1N3334A	S		1N2804	Z						56	220	10	50W
★1N3334B	S		1N2804	Z						56	220	5.0	50W
★1N3335	S		1N2804	Z						62	200	20	50W
★1N3335A	S		1N2804	Z						62	200	10	50W
★1N3335B	S		1N2804	Z						62	200	5.0	50W
★1N3336	S		1N2804	Z						68	180	20	50W
★1N3336A	S		1N2804	Z						68	180	10	50W
★1N3336B	S		1N2804	Z						68	180	5.0	50W
★1N3337	S		1N2804	Z						75	170	20	50W
★1N3337A	S		1N2804	Z						75	170	10	50W
★1N3337B	S		1N2804	Z						75	170	5.0	50W
★1N3338	S		1N2804	Z						82	150	20	50W
★1N3338A	S		1N2804	Z						82	150	10	50W
★1N3338B	S		1N2804	Z						82	150	5.0	50W
★1N3339	S		1N2804	Z						91	140	20	50W
★1N3339A	S		1N2804	Z						91	140	10	50W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N3339B	S		1N2804	Z						91	140	5.0	50W
★1N3340	S		1N2804	Z						100	120	20	50W
★1N3340A	S		1N2804	Z						100	120	10	50W
★1N3340B	S		1N2804	Z						100	120	5.0	50W
★1N3341	S		1N2804	Z						105	120	20	50W
★1N3341A	S		1N2804	Z						105	120	10	50W
★1N3341B	S		1N2804	Z						105	120	5.0	50W
★1N3342	S		1N2804	Z						110	110	20	50W
★1N3342A	S		1N2804	Z						110	110	10	50W
★1N3342B	S		1N2804	Z						110	110	5.0	50W
★1N3343	S		1N2804	Z						120	100	20	50W
★1N3343A	S		1N2804	Z						120	100	10	50W
★1N3343B	S		1N2804	Z						120	100	5.0	50W
★1N3344	S		1N2804	Z						130	95	20	50W
★1N3344A	S		1N2804	Z						130	95	10	50W
★1N3344B	S		1N2804	Z						130	95	5.0	50W
★1N3345	S		1N2804	Z						140	90	20	50W
★1N3345A	S		1N2804	Z						140	90	10	50W
★1N3345B	S		1N2804	Z						140	90	5.0	50W
★1N3346	S		1N2804	Z						150	85	20	50W
★1N3346A	S		1N2804	Z						150	85	10	50W
★1N3346B	S		1N2804	Z						150	85	5.0	50W
★1N3347	S		1N2804	Z						160	80	20	50W
★1N3347A	S		1N2804	Z						160	80	10	50W
★1N3347B	S		1N2804	Z						160	80	5.0	50W
★1N3348	S		1N2804	Z						175	70	20	50W
★1N3348A	S		1N2804	Z						175	70	10	50W
★1N3348B	S		1N2804	Z						175	70	5.0	50W
★1N3349	S		1N2804	Z						180	68	20	50W
★1N3349A	S		1N2804	Z						180	68	10	50W
★1N3349B	S		1N2804	Z						180	68	5.0	50W
★1N3350	S		1N2804	Z						200	65	20	50W
★1N3350A	S		1N2804	Z						200	65	10	50W
★1N3350B	S		1N2804	Z						200	65	5.0	50W
1N3353	G			B									
1N3354	S			G	10	1.2	3.0	0.020	30				
1N3355	S			G	15	1.2	3.0	0.020	30				
1N3356	S			G	25	1.2	3.0	0.010	30				
1N3357	S			G	50	1.2	3.0	0.010	30				
1N3358	S			G	75	1.2	3.0	0.010	30				
1N3359	S			G	100	1.2	3.0	0.010	30				
1N3360	S			G	150	1.2	3.0	0.010	30				
1N3361	S			G	200	1.2	3.0	0.010	30				
1N3362	S			G	300	1.2	3.0	0.010	30				
1N3363	S			G	400	1.2	3.0	0.010	30				
1N3364	S			G	500	1.2	3.0	0.010	30				
1N3365	S			G	600	1.2	3.0	0.010	30				
1N3366	S			G	700	1.2	3.0	0.010	30				
1N3367	S			G	800	2.0	3.0	0.010	30				
1N3368	S			G	900	2.0	3.0	0.010	30				
1N3369	S			G	1000	2.5	3.0	0.025	30				
1N3370	S			G	1200	2.5	3.0	0.025	30				
1N3371	S			G	1500	2.5	3.0	0.025	30				
1N3372	S			G	10	1.0	20	0.315	200				
1N3373	S			G	25	1.0	20	0.315	200				
1N3374	S			G	50	1.0	20	0.315	200				
1N3375	S			G	100	1.0	20	0.315	200				
1N3376	S			G	150	1.0	20	0.315	200				
1N3377	S			G	200	1.0	20	0.315	200				
1N3378	S			G	300	1.0	20	0.315	200				
1N3379	S			G	400	1.0	20	0.315	200				
1N3380	S			G	500	1.0	20	0.315	200				
1N3381	S			S	15	1.0	500m	10*					
1N3382	S			S	15	1.0	500m	10*					
1N3383	S			S	50	1.0	500m	10*					
1N3384	S			S	75	1.0	500m	15*					
1N3385	S			S	100	1.0	500m	20*					
1N3386	S			S	150	1.0	500m	20*					
1N3387	S			S	200	1.0	500m	20*					
1N3388	S			S	250	1.0	500m	25*					

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N3389	S			S	300	1.0	500m	25*					
1N3390	S			S	400	1.0	500m	25*					
1N3391	S			S	500	1.0	500m	25*					
1N3392	S			Z						1.5	50	10	500m
1N3393	S			C						1.8	50	10	500m
1N3394	S			C						2.2	50	10	500m
1N3395	S			C						2.7	50	10	500m
1N3396	S			C						3.3	30	10	500m
1N3397	S			C						3.9	30	10	500m
1N3398	S			C						4.7	30	10	500m
1N3399	S			C						5.6	20	10	500m
1N3400	S			C						6.8	20	10	500m
1N3401	S			C						8.2	10	10	500m
1N3402	S			C						10	10	10	500m
1N3403	S			C						12	10	10	500m
1N3404	S			C						15	10	10	500m
1N3405	S			C						18	10	10	500m
1N3406	S			C						22	3.0	10	500m
1N3407	S			C						27	3.0	10	500m
1N3408	S			C						33	3.0	10	500m
1N3409	S			C						39	1.5	10	500m
1N3410	S			C						47	1.5	10	500m
1N3411	S	1N5234A	1N5221	Z						6.2	1.0	10	500m
1N3412	S	1N5235A	1N5221	Z						6.8	1.0	10	500m
1N3413	S	1N5236A	1N5221	Z						7.5	1.0	10	500m
1N3414	S	1N5237A	1N5221	Z						8.2	1.0	10	500m
1N3415	S	1N5240A	1N5221	Z						10	1.0	10	500m
1N3416	S	1N5242A	1N5221	Z						12	1.0	10	500m
1N3417	S	1N5245A	1N5221	Z						15	1.0	10	500m
1N3418	S	1N5248A	1N5221	Z						18	1.0	10	500m
1N3419	S	1N5251A	1N5221	Z						22	1.0	10	500m
1N3420	S	1N5254A	1N5221	Z						27	1.0	10	500m
1N3421	S	1N5256A	1N5221	Z						30	1.0	10	500m
1N3422	S	1N5257A	1N5221	Z						33	1.0	10	500m
1N3423	S	1N5259A	1N5221	Z						39	1.0	10	500m
1N3424	S	1N5261A	1N5221	Z						47	1.0	10	500m
1N3425	S	1N5263A	1N5221	Z						56	1.0	10	500m
1N3426	S	1N5266A	1N5222	Z						68	1.0	10	500m
1N3427	S	1N5268A	1N5221	Z						82	1.0	10	500m
1N3428	S	1N5271A	1N5221	Z						100	1.0	10	500m
1N3429	S	1N5273A	1N5221	Z						120	1.0	10	500m
1N3430	S	1N5276A	1N5221	Z						150	1.0	10	500m
1N3431	S	1N5279A	1N5221	Z						180	1.0	10	500m
1N3432	S	1N5281A	1N5221	Z						220	1.0	10	500m
1N3433	S	1N4738	1N4728	Z						8.2	25	10	2.0W
1N3434	S	1N4740	1N4728	Z						10.0	25	10	2.0W
1N3435	S	1N4742	1N4728	Z						12.0	25	10	2.0W
1N3436	S	1N4744	1N4728	Z						15.0	25	10	2.0W
1N3437	S	1N4746	1N4728	Z						18.0	25	10	2.0W
1N3438	S	1N4748	1N4728	Z						22.0	7.5	10	2.0W
1N3439	S	1N4750	1N4728	Z						27.0	7.5	10	2.0W
1N3440	S	1N4752	1N4728	Z						33.0	7.5	10	2.0W
1N3441	S	1N4754	1N4728	Z						39.0	7.5	10	2.0W
1N3442	S	1N4756	1N4728	Z						47.0	7.5	10	2.0W
1N3443	S	1N4735	1N4728	Z						6.2	2.0	10	2.0W
1N3444	S	1N4736	1N4728	Z						6.8	2.0	10	2.0W
1N3445	S	1N4738	1N4728	Z						8.2	2.0	10	2.0W
1N3446	S	1N4740	1N4728	Z						10	2.0	10	2.0W
1N3447	S	1N4742	1N4728	Z						12	2.0	10	2.0W
1N3448	S	1N4744	1N4728	Z						15	2.0	10	2.0W
1N3449	S	1N4746	1N4728	Z						18	2.0	10	2.0W
1N3450	S	1N4748	1N4728	Z						22	2.0	10	2.0W
1N3451	S	1N4750	1N4728	Z						27	2.0	10	2.0W
1N3452	S	1N4751	1N4728	Z						30	2.0	10	2.0W
1N3453	S	1N4752	1N4728	Z						33	2.0	10	2.0W
1N3454	S	1N4754	1N4728	Z						39	2.0	10	2.0W
1N3455	S	1N4756	1N4728	Z						47	2.0	10	2.0W
1N3456	S	1N4758	1N4728	Z						56	2.0	10	2.0W
1N3457	S	1N4760	1N4728	Z						68	2.0	10	2.0W
1N3458	S	1N4762	1N4728	Z						82	2.0	10	2.0W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N3459	S	1N4764	1N4728	Z						100	2.0	10	2.0W
1N3460	S	1M120ZS10	1N4728	Z						120	2.0	10	2.0W
1N3461	S	1M150ZS10	1N4728	Z						150	2.0	10	2.0W
1N3462	S	1M180ZS10	1N4728	Z						180	2.0	10	2.0W
1N3463	S	1M200ZS5	1N4728	Z						220	2.0	10	2.0W
1N3464	S			G	8500	30.0	0.1	0.001	2.0				
1N3465	G			S	60	1.0	200m	20*					
1N3466	G			S	40	1.0	200m	15*					
1N3467	G			S	15	0.5	20m	15*	2.0				
1N3468	G			S	15	0.5	20m	60*	2.0				
1N3469	G			S	35	0.5	600m	15*					
1N3470	G			S	35	0.5	600m	30*					
1N3471	S			S	40	1.0	10m	20n	2.0				
1N3473	S			G	200	1.4	0.75	0.5	20				
1N3474	S			G	400	1.4	0.75	0.5	20				
1N3475	S			G	600	1.4	0.75	0.5	20				
1N3476	S			G	800	1.4	0.5	0.5	20				
1N3477	S	1N5221A	1N5221	Z						2.2	5.0	10	250m
1N3477A	S	1N5221B	1N5221	Z						2.2	5.0	5.0	250m
1N3478	S			S	200	1.0	500m	10*					
1N3479	S			S	400	1.0	500m	10*					
1N3480	S			S	600	1.0	500m	10*					
1N3481	G		Table 4	M									
1N3482	G		Table 4	M									
1N3483	G			S	8.0	0.6	10m	30*					
1N3484	G			S	75	0.45	10m	4.0*					
1N3485	S			S	175	1.0	10m	25n	0.05				
1N3486	S	1N4007	1N4001	G	1000	2.0	0.4	0.05	10				
1N3487	S	MR1-1200	MR1-1200	G	1200	2.0	0.4	0.05	10				
1N3488			Table 3	V									
1N3489			Table 6	4									
1N3490			Table 6	4									
★1N3491	S		1N3491	G	50	1.7	18	1.0	300				
★1N3492	S		1N3491	G	100	1.7	18	1.0	300				
★1N3493	S		1N3491	G	200	1.7	18	1.0	300				
★1N3494	S		1N3491	G	300	1.7	18	1.0	300				
★1N3495	S		1N3491	G	400	1.7	18	1.0	300				
1N3496	S	1N823	1N821	R						6.2	0.005	7.5	-55/100
1N3497	S	1N825	1N821	R						6.2	0.002	7.5	-55/100
1N3498	S	1N827	1N821	R						6.2	0.001	7.5	-55/100
1N3499	S	1N829	1N821	R						6.2	0.0005	7.5	-55/100
1N3500	S	1N821	1N821	R						6.2	0.01	7.5	-55/100
1N3501	S	MZ640	MZ600	R						6.35	0.01	7.5	-55/100
1N3502	S	MZ620	MZ600	R						6.35	0.01	7.5	-55/100
1N3503	S	MZ610	MZ600	R						6.35	0.005	7.5	-55/100
1N3504	S	MZ605	MZ600	R						6.35	0.002	7.5	-55/100
1N3506	S	1N5226B	1N5221	Z						3.3	20	5.0	20W
1N3507	S	1N5227B	1N5221	Z						3.6	20	5.0	20W
1N3508	S	1N5228B	1N5221	Z						3.9	20	5.0	20W
1N3509	S	1N5229B	1N5221	Z						4.3	20	5.0	20W
1N3510	S	1N5230B	1N5221	Z						4.7	20	5.0	20W
1N3511	S	1N5231B	1N5221	Z						5.1	20	5.0	20W
1N3512	S	1N5232B	1N5221	Z						5.6	20	5.0	20W
1N3513	S	1N5234B	1N5221	Z						6.2	20	5.0	20W
1N3514	S	1N5235B	1N5221	Z						6.8	20	5.0	20W
1N3515	S	1N5236B	1N5221	Z						7.5	10	5.0	10W
1N3516	S	1N5237B	1N5221	Z						8.2	10	5.0	10W
1N3517	S	1N5239B	1N5221	Z						9.1	10	5.0	10W
1N3518	S	1N5240B	1N5221	Z						10	10	5.0	10W
1N3519	S	1N5241B	1N5221	Z						11	10	5.0	10W
1N3520	S	1N5242B	1N5221	Z						12	10	5.0	10W
1N3521	S	1N5243B	1N5221	Z						13	10	5.0	10W
1N3522	S	1N5245B	1N5221	Z						15	5.0	5.0	5.0W
1N3523	S	1N5246B	1N5221	Z						16	5.0	5.0	5.0W
1N3524	S	1N5248B	1N5221	Z						18	5.0	5.0	5.0W
1N3525	S	1N5250B	1N5221	Z						20	5.0	5.0	5.0W
1N3526	S	1N5251B	1N5221	Z						22	5.0	5.0	5.0W
1N3527	S	1N5252B	1N5221	Z						24	5.0	5.0	5.0W
1N3528	S	1N5254B	1N5221	Z						27	4.0	5.0	4.0W
1N3529	S	1N5256B	1N5221	Z						30	4.0	5.0	4.0W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N3530	S	1N5257B	1N5221	Z						33	3.0	5.0	3.0W
1N3531	S	1N5258B	1N5221	Z						36	3.0	5.0	3.0W
1N3532	S	1N5259B	1N5221	Z						39	3.0	5.0	3.0W
1N3533	S	1N5260B	1N5221	Z						43	2.0	5.0	2.0W
1N3534	S	1N5261B	1N5221	Z						47	2.0	5.0	2.0W
1N3535	S			S									
1N3536	S			S									
1N3537	S			C						12	25	8.3	1.0W
1N3538	S			S	150		2.5m	2.0*					
1N3539	S			B									
1N3539A	S			B									
1N3540	S			B									
1N3540A	S			B									
1N3541	S			B									
1N3541A	S			B									
1N3542	S			B									
1N3542A	S			B									
1N3543	S			B									
1N3543A	S			B									
1N3544	S	1N4002	1N4001	G	100	1.5	0.6	0.2	15				
1N3545	S	1N4003	1N4001	G	200	1.5	0.6	0.2	15				
1N3546	S	1N4004	1N4001	G	300	1.5	0.6	0.2	15				
1N3547	S	1N4004	1N4001	G	400	1.5	0.6	0.2	15				
1N3548	S	1N4005	1N4001	G	500	1.5	0.6	0.2	15				
1N3549	S	1N4005	1N4001	G	600	1.5	0.6	0.2	15				
1N3550	S			S	180	1.0	50m		1.5				
1N3551			Table 3	V									
1N3552			Table 3	V									
1N3553	S	1N821	1N821	R						6.3	0.01	7.5	-55/100
1N3554			Table 3	V									
thru 1N3557			Table 3	V									
1N3558	S			Z									
1N3559	G			S	24	1.0	200m	20*					
1N3560				T									
thru 1N3562	G			T									
1N3563	S			G	1000	1.2	0.4	0.2	40				
1N3564	G			S	15	1.0	40m						
1N3565	S			S	6.0	2.0	2.0	25m					
1N3566	S			G	800	2.25	1.0	0.5	20				
1N3567	S			S	50	1.0	100m	0.05*	2.0				
1N3568	S			S	80	1.0	20m	1.0*	2.0				
1N3569	S	MR1121	MR1120	G	100	1.3	3.5	0.4	35				
1N3570	S	MR1123	MR1120	G	200	1.3	3.5	0.4	35				
1N3571	S	MR1123	MR1120	G	300	1.3	3.5	0.4	35				
1N3572	S	MR1124	MR1120	G	400	1.3	3.5	0.4	35				
1N3573	S	MR1125	MR1120	G	500	1.3	3.5	0.4	35				
1N3574	S	MR1126	MR1120	G	600	1.3	3.5	0.4	35				
1N3575	S			S	60	0.74	1.0m	0.75n					
1N3576	S			S	125	0.74	1.0m	0.75n					
1N3577	S			S	175	0.74	1.0m	0.75n					
1N3578	S			S	225	0.74	1.0m	0.75n					
1N3579	S			S	275	0.74	1.0m	0.75n					
★1N3580	S		1N2163	R						11.7	0.01	7.5	0/75
★1N3580A	S		1N2163	R						11.7	0.01	7.5	-55/100
★1N3580B	S		1N2163	R						11.7	0.01	7.5	-55/150
★1N3581	S		1N2163	R						11.7	0.005	7.5	0/75
★1N3581A	S		1N2163	R						11.7	0.005	7.5	-55/100
★1N3581B	S		1N2163	R						11.7	0.005	7.5	-55/150
★1N3582	S		1N2163	R						11.7	0.002	7.5	0/75
★1N3582A	S		1N2163	R						11.7	0.002	7.5	-55/100
★1N3582B	S		1N2163	R						11.7	0.002	7.5	-55/150
★1N3583	S		1N2163	R						11.7	0.001	7.5	0/75
★1N3583A	S		1N2163	R						11.7	0.001	7.5	-55/100
★1N3583B	S		1N2163	R						11.7	0.001	7.5	-55/150
1N3584	S	1N945	1N941	R						11.7	0.0005	7.5	0/75
1N3584A	S	1N945A	1N941	R						11.7	0.0005	7.5	-55/100
1N3584B	S	1N945B	1N941	R						11.7	0.0005	7.5	-55/150
1N3585	S	MR1240SB	MR1240	G	50	1.25	400	25	8000				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N3586	S	MR1241SB	MR1240	G	100	1.25	400	25	8000				
1N3587	S	MR1243SB	MR1240	G	200	1.25	400	25	8000				
1N3588	S	MR1245SB	MR1240	G	300	1.25	400	25	8000				
1N3589	S	MR1247SB	MR1240	G	400	1.25	400	25	8000				
1N3590	S	MR1248SB	MR1240	G	500	1.25	400	25	8000				
1N3591	S	MR1249SB	MR1240	G	600	1.25	400	25	8000				
1N3592	G			S	30	0.35	2.0m	4.0*	0.04				
1N3593	S			S	40	1.0	10m	25n	10				
1N3594	S			S	60	1.0	50m	0.1m	6.0				
1N3595	S			S	125	1.0	200m	1.0m	3.0				
1N3596	S			S	20	1.0	30m	0.1*	4.0				
1N3597	S			S	150	1.2	400m	0.1*	0.3				
1N3598	S			S	50	0.85	10m	0.1*	4.0				
1N3599	S			S	150	1.0	100m	0.1*	50				
1N3600	S			S	50	1.0	200m	100*	6.0				
1N3601	S			S	75	1.0	10m	0.1*	5.0				
1N3602	S			S	50	1.0	20m	0.1*	5.0				
1N3603	S			S	30	1.0	30m	0.1*	5.0				
1N3604	S			S	75	1.0	50m	0.05*	2.0				
1N3605	S			S	40	0.55	0.1m	0.05*	2.0				
1N3606	S			S	75	0.55	0.1m	0.05*	2.0				
1N3607	S			S	75	1.0	50m	0.05*	2.0				
1N3608	S			S	40	0.55	0.1m	0.05*	2.0				
1N3609	S			S	75	0.55	0.1m	0.05*	2.0				
1N3611	S	1N4003	1N4001	S	200	1.0	750m	10*					
1N3612	S	1N4004	1N4001	S	400	1.0	750m	10*					
1N3613	S	1N4005	1N4001	S	600	1.0	750m	10*					
1N3614	S	1N4006	1N4001	S	800	1.0	750m	10*					
1N3615	S	MR1120	MR1120	G	50	1.2	16	3.0	300				
1N3616	S	MR1121	MR1120	G	100	1.2	16	2.5	300				
1N3617	S	MR1122	MR1120	G	150	1.2	16	2.25	300				
1N3618	S	MR1122	MR1120	G	200	1.2	16	2.0	300				
1N3619	S	MR1123	MR1120	G	300	1.2	16	1.75	300				
1N3620	S	MR1124	MR1120	G	400	1.2	16	1.5	300				
1N3621	S	MR1125	MR1120	G	500	1.2	16	1.25	300				
1N3622	S	MR1126	MR1120	G	600	1.2	16	1.0	300				
1N3623	S	MR1128	MR1120	G	800	1.2	16	0.75	300				
1N3624	S	MR1130	MR1120	G	1000	1.2	16	0.6	300				
1N3625	S			S	225	1.0	40m	0.5*	0.5				
1N3626	G			S	50	0.5	10m	1.0m	0.45				
1N3627			Table 3	V									
1N3628			Table 3	V									
1N3629	S			G	100	1.0	0.75	0.01	30				
1N3630	S			G	200	1.0	0.75	0.01	30				
1N3631	S			G	300	1.0	0.75	0.01	30				
1N3632	S			G	400	1.0	0.75	0.01	30				
1N3633	S			G	500	1.0	0.75	0.01	30				
1N3634	S			G	600	1.0	0.75	0.01	30				
1N3635	S			G	700	1.0	0.75	0.01	30				
1N3636	S			G	800	1.0	0.75	0.01	30				
1N3637	S			G	900	1.0	0.75	0.01	30				
1N3638	S			G	1000	1.0	0.75	0.01	30				
1N3639	S	1N4003	1N4001	G	200	1.2	0.75	0.2	40				
1N3640	S	1N4004	1N4001	G	400	1.2	0.75	0.2	40				
1N3641	S	1N4005	1N4001	G	600	1.2	0.75	0.2	40				
1N3642	S	1N4006	1N4001	G	800	1.2	0.75	0.2	40				
1N3643	S			S	1000	5.0	250m	5.0*					
1N3644	S			S	1500	5.0	250m	5.0*					
1N3645	S			S	1000	5.0	250m	5.0*					
1N3646	S			S	2500	5.0	250m	5.0*					
1N3647	S			S	3000	5.0	250m	5.0*					
1N3648	S			G	10k	23	0.35	0.5	30				
★1N3649	S	MR1128	MR1120	G	800	1.1	1.0	0.005	25				
1N3650	S	MR1130	MR1120	G	1000	1.1	1.0	0.005	25				
1N3653	S			S	90	1.0	400m	25n	4.0				
1N3654	S			S	90	1.0	50m	25n	4.0				
1N3655	S		Table 4	M									
1N3655A	S		Table 4	M									
1N3655B	S		Table 4	M									
1N3656	S			S	200	1.2	500m	0.01m					

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N3657	S			S	400	1.2	500m	0.01m					
1N3658	S			S	600	1.2	500m	0.01m					
★1N3659	S		1N3659	G	50	1.4	25	5.0	400				
★1N3660	S		1N3659	G	100	1.4	25	4.5	400				
★1N3661	S		1N3659	G	200	1.4	25	4.0	400				
★1N3662	S		1N3659	G	300	1.4	25	3.5	400				
★1N3663	S		1N3659	G	400	1.4	25	3.0	400				
1N3664	S			G	500	1.4	25	2.5	400				
1N3665	S			G	600	1.4	25	2.0	400				
1N3666	G			S	80	1.0	200m	25*	0.3				
1N3667	S			G	500	1.2	1.5	1.2	30				
1N3668	S			S	30	1.0	5.0m	0.1*	0.15				
1N3669	S			S	70	1.1	400m	0.25*	0.2				
1N3670	S	MR1128	MR1120	G	700	2.05	12	3.0	200				
1N3670A	S	MR1128	MR1120	G	700	1.5	12	0.9	240				
1N3671	S	MR1128	MR1120	G	800	2.05	12	2.0	200				
1N3671A	S	MR1128	MR1120	G	800	1.3	12	0.8	240				
1N3672	S	MR1130	MR1120	G	900	2.05	12	2.0	200				
1N3672A	S	MR1130	MR1120	G	900	1.15	12	0.7	240				
1N3673	S	MR1130	MR1120	G	1000	2.05	12	1.0	200				
1N3673A	S	MR1130	MR1120	G	1000	1.0	12	0.6	240				
★1N3675	S	1N4736	1N4728	Z						6.8	19	20	750m
★1N3675A	S	1N4736	1N4728	Z						6.8	19	10	750m
★1N3675B	S	1N4736A	1N4728	Z						6.8	19	5.0	750m
★1N3676	S	1N4737	1N4728	Z						7.5	17	20	750m
★1N3676A	S	1N4737	1N4728	Z						7.5	17	10	750m
★1N3676B	S	1N4737A	1N4728	Z						7.5	17	5.0	750m
★1N3677	S	1N4738	1N4728	Z						8.2	15	20	750m
★1N3677A	S	1N4738	1N4728	Z						8.2	15	10	750m
★1N3677B	S	1N4738A	1N4728	Z						8.2	15	5.0	750m
★1N3678	S	1N4739	1N4728	Z						9.1	14	20	750m
★1N3678A	S	1N4739	1N4728	Z						9.1	14	10	750m
★1N3678B	S	1N4739A	1N4728	Z						9.1	14	5.0	750m
★1N3679	S	1N4740	1N4728	Z						10	13	20	750m
★1N3679A	S	1N4740	1N4728	Z						10	13	10	750m
★1N3679B	S	1N4740A	1N4728	Z						10	13	5.0	750m
★1N3680	S	1N4741	1N4728	Z						11	12	20	750m
★1N3680A	S	1N4741	1N4728	Z						11	12	10	750m
★1N3680B	S	1N4741A	1N4728	Z						11	12	5.0	750m
★1N3681	S	1N4742	1N4728	Z						12	11	20	750m
★1N3681A	S	1N4742	1N4728	Z						12	11	10	750m
★1N3681B	S	1N4742A	1N4728	Z						12	11	5.0	750m
★1N3682	S	1N4743	1N4728	Z						13	9.5	20	750m
★1N3682A	S	1N4743	1N4728	Z						13	9.5	10	750m
★1N3682B	S	1N4743A	1N4728	Z						13	9.5	5.0	750m
★1N3683	S	1N4744	1N4728	Z						15	8.5	20	750m
★1N3683A	S	1N4744	1N4728	Z						15	8.5	10	750m
★1N3683B	S	1N4744A	1N4728	Z						15	8.5	5.0	750m
★1N3684	S	1N4745	1N4728	Z						16	7.8	20	750m
★1N3684A	S	1N4745	1N4728	Z						16	7.8	10	750m
★1N3684B	S	1N4745A	1N4728	Z						16	7.8	5.0	750m
★1N3685	S	1N4746	1N4728	Z						18	7.0	20	750m
★1N3685A	S	1N4746	1N4728	Z						18	7.0	10	750m
★1N3685B	S	1N4746A	1N4728	Z						18	7.0	5.0	750m
★1N3686	S	1N4747	1N4728	Z						20	6.2	20	750m
★1N3686A	S	1N4747	1N4728	Z						20	6.2	10	750m
★1N3686B	S	1N4747A	1N4728	Z						20	6.2	5.0	750m
★1N3687	S	1N4748	1N4728	Z						22	5.6	20	750m
★1N3687A	S	1N4748	1N4728	Z						22	5.6	10	750m
★1N3687B	S	1N4748A	1N4728	Z						22	5.6	5.0	750m
★1N3688	S	1N4749	1N4728	Z						24	5.2	20	750m
★1N3688A	S	1N4749	1N4728	Z						24	5.2	10	750m
★1N3688B	S	1N4749A	1N4728	Z						24	5.2	5.0	750m
★1N3689	S	1N4750	1N4728	Z						27	4.6	20	750m
★1N3689A	S	1N4750	1N4728	Z						27	4.6	10	750m
★1N3689B	S	1N4750A	1N4728	Z						27	4.6	5.0	750m
★1N3690	S	1N4751	1N4728	Z						30	4.2	20	750m
★1N3690A	S	1N4751	1N4728	Z						30	4.2	10	750m
★1N3690B	S	1N4751A	1N4728	Z						30	4.2	5.0	750m
★1N3691	S	1N4752	1N4728	Z						33	3.8	20	750m

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N3691A	S	1N4752	1N4728	Z						33	3.8	10	750m
★1N3691B	S	1N4752A	1N4728	Z						33	3.8	5.0	750m
★1N3692	S	1N4753	1N4728	Z						36	3.4	20	750m
★1N3692A	S	1N4753	1N4728	Z						36	3.4	10	750m
★1N3692B	S	1N4753A	1N4728	Z						36	3.4	5.0	750m
★1N3693	S	1N4754	1N4728	Z						39	3.2	20	750m
★1N3693A	S	1N4754	1N4728	Z						39	3.2	10	750m
★1N3693B	S	1N4754A	1N4728	Z						39	3.2	5.0	750m
★1N3694	S	1N4755	1N4728	Z						43	3.0	20	750m
★1N3694A	S	1N4755	1N4728	Z						43	3.0	10	750m
★1N3694B	S	1N4755A	1N4728	Z						43	3.0	5.0	750m
★1N3695	S	1N4756	1N4728	Z						47	2.7	20	750m
★1N3695A	S	1N4756	1N4728	Z						47	2.7	10	750m
★1N3695B	S	1N4756A	1N4728	Z						47	2.7	5.0	750m
★1N3696	S	1N4757	1N4728	Z						51	2.5	20	750m
★1N3696A	S	1N4757	1N4728	Z						51	2.5	10	750m
★1N3696B	S	1N4757A	1N4728	Z						51	2.5	5.0	750m
★1N3697	S	1N4758	1N4728	Z						56	2.2	20	750m
★1N3697A	S	1N4758	1N4728	Z						56	2.2	10	750m
★1N3697B	S	1N4758A	1N4728	Z						56	2.2	5.0	750m
★1N3698	S	1N4759	1N4728	Z						62	2.0	20	750m
★1N3698A	S	1N4759	1N4728	Z						62	2.0	10	750m
★1N3698B	S	1N4759A	1N4728	Z						62	2.0	5.0	750m
★1N3699	S	1N4760	1N4728	Z						68	1.8	20	750m
★1N3699A	S	1N4760	1N4728	Z						68	1.8	10	750m
★1N3699B	S	1N4760A	1N4728	Z						68	1.8	5.0	750m
★1N3700	S	1N4761	1N4728	Z						75	1.7	20	750m
★1N3700A	S	1N4761	1N4728	Z						75	1.7	10	750m
★1N3700B	S	1N4761A	1N4728	Z						75	1.7	5.0	750m
★1N3701	S	1N4762	1N4728	Z						82	1.5	20	750m
★1N3701A	S	1N4762	1N4728	Z						82	1.5	10	750m
★1N3701B	S	1N4762A	1N4728	Z						82	1.5	5.0	750m
★1N3702	S	1N4763	1N4728	Z						91	1.4	20	750m
★1N3702A	S	1N4763	1N4728	Z						91	1.4	10	750m
★1N3702B	S	1N4763A	1N4728	Z						91	1.4	5.0	750m
★1N3703	S	1N4764	1N4728	Z						100	1.3	20	750m
★1N3703A	S	1N4764	1N4728	Z						100	1.3	10	750m
★1N3703B	S	1N4764A	1N4728	Z						100	1.3	5.0	750m
1N3704	S	1M110ZS10	1N4728	Z						110	1.1	20	750m
1N3704A	S	1M110ZS10	1N4728	Z						110	1.1	10	750m
1N3704B	S	1M110ZS5	1N4728	Z						110	1.1	5.0	750m
1N3705	S	1M120ZS10	1N4728	Z						120	1.0	20	750m
1N3705A	S	1M120ZS10	1N4728	Z						120	1.0	10	750m
1N3705B	S	1M120ZS5	1N4728	Z						120	1.0	5.0	750m
1N3706	S	1M130ZS10	1N4728	Z						130	0.95	20	750m
1N3706A	S	1M130ZS10	1N4728	Z						130	0.95	10	750m
1N3706B	S	1M130ZS5	1N4728	Z						130	0.95	5.0	750m
1N3707	S	1M150ZS10	1N4728	Z						150	0.85	20	750m
1N3707A	S	1M150ZS10	1N4728	Z						150	0.85	10	750m
1N3707B	S	1M150ZS5	1N4728	Z						150	0.85	5.0	750m
1N3708	S	1M160ZS10	1N4728	Z						160	0.80	20	750m
1N3708A	S	1M160ZS10	1N4728	Z						160	0.80	10	750m
1N3708B	S	1M160ZS5	1N4728	Z						160	0.80	5.0	750m
1N3709	S	1M180ZS10	1N4728	Z						180	0.68	20	750m
1N3709A	S	1M180ZS10	1N4728	Z						180	0.68	10	750m
1N3709B	S	1M180ZS5	1N4728	Z						180	0.68	5.0	750m
1N3710	S	1M200ZS10	1N4728	Z						200	0.65	20	750m
1N3710A	S	1M200ZS10	1N4718	Z						200	0.65	10	750m
1N3710B	S	1M200ZS5	1N4728	Z						200	0.65	5.0	750m
1N3711	S			G	6000	11	0.15	0.025	5.0				
1N3712 thru 1N3721	G			T									
1N3722	S			S	50	1.0	20m	0.1*	10				
1N3723	S	1N4007	1N4001	G	1000	2.2	0.75	0.005	12				
1N3724	S	MR1-1200	MR1-1200	G	1200	2.2	0.75	0.005	12				
1N3725	S	MR1-1400	MR1-1200	G	1400	2.2	0.75	0.005	12				
1N3726	S	MR1-1600	MR1-1200	G	1600	2.2	0.75	0.005	12				
1N3727	S			G	1800	2.2	0.75	0.005	12				
1N3728	S			S	550	1.2	400m	0.1*					

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N3729	S			S	600	1.0	5.0m	0.1*	0.5				
1N3730	S			S	80	1.0	750m	0.1*	15				
1N3731	S			S	80	1.0	100m	5.0*	3.0				
1N3732	S		1N4728	Z						5.1	40	5.0	1.0W
1N3733	S		Table 4	M									
1N3734	S			D									
1N3735	S	MR1231SB	MR1230	G	100	1.3	250	16	4500				
1N3736	S	MR1233SB	MR1230	G	200	1.3	250	16	4500				
1N3737	S	MR1235SB	MR1230	G	300	1.3	250	16	4500				
1N3738	S	MR1237SB	MR1230	G	400	1.3	250	16	4500				
1N3739	S	MR1238SB	MR1230	G	500	1.3	250	13	4500				
1N3740	S	MR1239SB	MR1230	G	600	1.3	250	12	4500				
1N3741	S			G	800	1.3	250	9.0	4500				
1N3742	S			G	1000	1.3	250	7.0	4500				
1N3743	S			G	1200	1.3	250	7.0	4500				
1N3744	S			G	1400	1.3	250	7.0	4500				
1N3745	S		Table 4	M									
1N3746	S		Table 4	M									
1N3747	S		Table 4	M									
1N3748	S	1N4003	1N4001	G	200	1.5	0.5		20				
1N3749	S	1N4004	1N4001	G	400	1.5	0.5		20				
1N3750	S	1N4005	1N4001	G	600	1.5	0.5		20				
1N3751	S	1N4006	1N4001	G	800	1.5	0.5		20				
1N3752	S	1N4007	1N4001	G	1000	1.5	0.5		20				
1N3753	G			S	55	1.0	150m	5.0*					
1N3754	S			G	100	1.2	0.15	0.3	15				
1N3755	S			G	200	1.2	0.15	0.3	15				
1N3756	S			G	400	1.2	0.15	0.3	15				
1N3757	S	1N4003	1N4001	G	200	1.0	1.0		30				
1N3758	S	1N4004	1N4001	G	400	1.0	1.0		30				
1N3759	S	1N4005	1N4001	G	600	1.0	1.0		30				
1N3760	S	1N4006	1N4001	G	800	1.0	1.0		30				
1N3761	S	1N4007	1N4001	G	1000	1.0	1.0		30				
1N3762	S			G	5300	12	0.065	0.005	15				
1N3763	S			R						20	0.002	10	-55/100
1N3764	S			G	3000	6.5	0.2	0.1	8.0				
1N3765	S			G	700	1.8	35	5.0	400				
1N3766	S			G	800	1.8	35	4.0	400				
1N3767	S			G	900	1.8	35	3.0	400				
1N3768	S			G	1000	1.8	35	2.0	400				
1N3769	G			S	90	0.5	25m	5.0*					
1N3770			Table 3	V									
1N3771			Table 6	4									
1N3772			Table 6	4									
1N3773	G			S	25	0.35	2.0m	4.0*	40				
1N3774	S			Z						1.15	10	2.0	0.34W
1N3775	S			G	1500	2.2	3.3	0.1	15				
1N3776	S			Z						10	25	10	6.0W
1N3777	S			S	40	1.1	10m	0.1*	4.0				
1N3778	S		Table 4	M									
1N3779	S	1N821A	1N821	R						6.5	0.015	7.5	-55/100
1N3780	S	1N821A	1N821	R						6.5	0.01	7.5	-55/100
1N3781	S	1N823A	1N821	R						6.5	0.005	7.5	-55/100
1N3782	S	1N825A	1N821	R						6.5	0.002	7.5	-55/100
1N3783	S	1N827A	1N821	R						6.5	0.001	7.5	-55/100
1N3784	S	1N829A	1N821	R						6.5	0.0005	7.5	-55/100
★1N3785	S		1N3785	Z						6.8	55	20	1.5W
★1N3785A	S		1N3785	Z						6.8	55	10	1.5W
★1N3785B	S		1N3785	Z						6.8	55	5.0	1.5W
★1N3786	S		1N3785	Z						7.5	50	20	1.5W
★1N3786A	S		1N3785	Z						7.5	50	10	1.5W
★1N3786B	S		1N3785	Z						7.5	50	5.0	1.5W
★1N3787	S		1N3785	Z						8.2	46	20	1.5W
★1N3787A	S		1N3785	Z						8.2	46	10	1.5W
★1N3787B	S		1N3785	Z						8.2	46	5.0	1.5W
★1N3788	S		1N3785	Z						9.1	41	20	1.5W
★1N3788A	S		1N3785	Z						9.1	41	10	1.5W
★1N3788B	S		1N3785	Z						9.1	41	5.0	1.5W
★1N3789	S		1N3785	Z						10	37	20	1.5W
★1N3789A	S		1N3785	Z						10	37	10	1.5W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N3789B	S		1N3785	Z						10	37	5.0	1.5W
★1N3790	S		1N3785	Z						11	34	20	1.5W
★1N3790A	S		1N3785	Z						11	34	10	1.5W
★1N3790B	S		1N3785	Z						11	34	5.0	1.5W
★1N3791	S		1N3785	Z						12	31	20	1.5W
★1N3791A	S		1N3785	Z						12	31	10	1.5W
★1N3791B	S		1N3785	Z						12	31	5.0	1.5W
★1N3792	S		1N3785	Z						13	29	20	1.5W
★1N3792A	S		1N3785	Z						13	29	10	1.5W
★1N3792B	S		1N3785	Z						13	29	5.0	1.5W
★1N3793	S		1N3785	Z						15	25	20	1.5W
★1N3793A	S		1N3785	Z						15	25	10	1.5W
★1N3793B	S		1N3785	Z						15	25	5.0	1.5W
★1N3794	S		1N3785	Z						16	23	20	1.5W
★1N3794A	S		1N3785	Z						16	23	10	1.5W
★1N3794B	S		1N3785	Z						16	23	5.0	1.5W
★1N3795	S		1N3785	Z						18	21	20	1.5W
★1N3795A	S		1N3785	Z						18	21	10	1.5W
★1N3795B	S		1N3785	Z						18	21	5.0	1.5W
★1N3796	S		1N3785	Z						20	19	20	1.5W
★1N3796A	S		1N3785	Z						20	19	10	1.5W
★1N3796B	S		1N3785	Z						20	19	5.0	1.5W
★1N3797	S		1N3785	Z						22	17	20	1.5W
★1N3797A	S		1N3785	Z						22	17	10	1.5W
★1N3797B	S		1N3785	Z						22	17	5.0	1.5W
★1N3798	S		1N3785	Z						24	16	20	1.5W
★1N3798A	S		1N3785	Z						24	16	10	1.5W
★1N3798B	S		1N3785	Z						24	16	5.0	1.5W
★1N3799	S		1N3785	Z						27	14	20	1.5W
★1N3799A	S		1N3785	Z						27	14	10	1.5W
★1N3799B	S		1N3785	Z						27	14	5.0	1.5W
★1N3800	S		1N3785	Z						30	12	20	1.5W
★1N3800A	S		1N3785	Z						30	12	10	1.5W
★1N3800B	S		1N3785	Z						30	12	5.0	1.5W
★1N3801	S		1N3785	Z						33	11	20	1.5W
★1N3801A	S		1N3785	Z						33	11	10	1.5W
★1N3801B	S		1N3785	Z						33	11	5.0	1.5W
★1N3802	S		1N3785	Z						36	10	20	1.5W
★1N3802A	S		1N3785	Z						36	10	10	1.5W
★1N3802B	S		1N3785	Z						36	10	5.0	1.5W
★1N3803	S		1N3785	Z						39	10	20	1.5W
★1N3803A	S		1N3785	Z						39	10	10	1.5W
★1N3803B	S		1N3785	Z						39	10	5.0	1.5W
★1N3804	S		1N3785	Z						43	9.0	20	1.5W
★1N3804A	S		1N3785	Z						43	9.0	10	1.5W
★1N3804B	S		1N3785	Z						43	9.0	5.0	1.5W
★1N3805	S		1N3785	Z						47	8.0	20	1.5W
★1N3805A	S		1N3785	Z						47	8.0	10	1.5W
★1N3805B	S		1N3785	Z						47	8.0	5.0	1.5W
★1N3806	S		1N3785	Z						51	7.4	20	1.5W
★1N3806A	S		1N3785	Z						51	7.4	10	1.5W
★1N3806B	S		1N3785	Z						51	7.4	5.0	1.5W
★1N3807	S		1N3785	Z						56	6.7	20	1.5W
★1N3807A	S		1N3785	Z						56	6.7	10	1.5W
★1N3807B	S		1N3785	Z						56	6.7	5.0	1.5W
★1N3808	S		1N3785	Z						62	6.0	20	1.5W
★1N3808A	S		1N3785	Z						62	6.0	10	1.5W
★1N3808B	S		1N3785	Z						62	6.0	5.0	1.5W
★1N3809	S		1N3785	Z						68	5.5	20	1.5W
★1N3809A	S		1N3785	Z						68	5.5	10	1.5W
★1N3809B	S		1N3785	Z						68	5.5	5.0	1.5W
★1N3810	S		1N3785	Z						75	5.0	20	1.5W
★1N3810A	S		1N3785	Z						75	5.0	10	1.5W
★1N3810B	S		1N3785	Z						75	5.0	5.0	1.5W
★1N3811	S		1N3785	Z						82	4.5	20	1.5W
★1N3811A	S		1N3785	Z						82	4.5	10	1.5W
★1N3811B	S		1N3785	Z						82	4.5	5.0	1.5W
★1N3812	S		1N3785	Z						91	4.1	20	1.5W
★1N3812A	S		1N3785	Z						91	4.1	10	1.5W
★1N3812B	S		1N3785	Z						91	4.1	5.0	1.5W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N3813	S		1N3785	Z						100	3.7	20	1.5W
★1N3813A	S		1N3785	Z						100	3.7	10	1.5W
★1N3813B	S		1N3785	Z						100	3.7	5.0	1.5W
★1N3814	S		1N3785	Z						110	3.4	20	1.5W
★1N3814A	S		1N3785	Z						110	3.4	10	1.5W
★1N3814B	S		1N3785	Z						110	3.4	5.0	1.5W
★1N3815	S		1N3785	Z						120	3.1	20	1.5W
★1N3815A	S		1N3785	Z						120	3.1	10	1.5W
★1N3815B	S		1N3785	Z						120	3.1	5.0	1.5W
★1N3816	S		1N3785	Z						130	2.9	20	1.5W
★1N3816A	S		1N3785	Z						130	2.9	10	1.5W
★1N3816B	S		1N3785	Z						130	2.9	5.0	1.5W
★1N3817	S		1N3785	Z						150	2.5	20	1.5W
★1N3817A	S		1N3785	Z						150	2.5	10	1.5W
★1N3817B	S		1N3785	Z						150	2.5	5.0	1.5W
★1N3818	S		1N3785	Z						160	2.3	20	1.5W
★1N3818A	S		1N3785	Z						160	2.3	10	1.5W
★1N3818B	S		1N3785	Z						160	2.3	5.0	1.5W
★1N3819	S		1N3785	Z						180	2.1	20	1.5W
★1N3819A	S		1N3785	Z						180	2.1	10	1.5W
★1N3819B	S		1N3785	Z						180	2.1	5.0	1.5W
★1N3820	S		1N3785	Z						200	1.9	20	1.5W
★1N3820A	S		1N3785	Z						200	1.9	10	1.5W
★1N3820B	S		1N3785	Z						200	1.9	5.0	1.5W
★1N3821	S		1N3821	Z						3.3	76	10	1.0W
★1N3821A	S		1N3821	Z						3.3	76	5.0	1.0W
★1N3822	S		1N3821	Z						3.6	69	10	1.0W
★1N3822A	S		1N3821	Z						3.6	69	5.0	1.0W
★1N3823	S		1N3821	Z						3.9	64	10	1.0W
★1N3823A	S		1N3821	Z						3.9	64	5.0	1.0W
★1N3824	S		1N3821	Z						4.3	58	10	1.0W
★1N3824A	S		1N3821	Z						4.3	58	5.0	1.0W
★1N3825	S		1N3821	Z						4.7	53	10	1.0W
★1N3825A	S		1N3821	Z						4.7	53	5.0	1.0W
★1N3826	S		1N3821	Z						5.1	49	10	1.0W
★1N3826A	S		1N3821	Z						5.1	49	5.0	1.0W
★1N3827	S		1N3821	Z						5.6	45	10	1.0W
★1N3827A	S		1N3821	Z						5.6	45	5.0	1.0W
★1N3828	S		1N3821	Z						6.2	41	10	1.0W
★1N3828A	S		1N3821	Z						6.2	41	5.0	1.0W
★1N3829	S		1N3821	Z						6.8	37	10	1.0W
★1N3829A	S		1N3821	Z						6.8	37	5.0	1.0W
★1N3830	S		1N3821	Z						7.5	34	10	1.0W
★1N3830A	S		1N3821	Z						7.5	34	5.0	1.0W
1N3831			Table 6	4									
thru 1N3846			Table 6	4									
1N3847 thru 1N3860	G			T									
1N3861	G			T									
1N3862	G			T									
1N3863	G			T									
1N3864	S			S	125	1.5	200m	1.0n	0.9				
1N3865	G			S	80		100m	15*	0.5				
1N3866	S	1N4003	1N4001	G	200	1.5	1.0	0.05	25				
1N3867	S	1N4004	1N4001	G	400	1.5	1.0	0.5	25				
1N3868	S	1N4005	1N4001	G	600	1.5	1.0	0.05	25				
1N3869	S	1N5007	1N4001	G	1000	3.0	0.5	0.05	10				
1N3870	S	MR1-1600	MR1-1200	G	1500	3.0	0.5	0.05	10				
1N3871	S			G	2500	6.0	0.25	0.05	5.0				
1N3872	S			S	90	1.0	150m	0.1*	15				
1N3873	S			S	50	1.14	0.2	0.1*	4.0				
1N3874	S			G	50	1.5	6.0	3.0	75				
1N3875	S			G	100	1.5	6.0	3.0	75				
1N3876	S			G	200	1.5	6.0	3.0	75				
1N3877	S			G	300	1.5	6.0	3.0	75				
1N3878	S			G	400	1.5	6.0	3.0	75				
★1N3879	S		1N3879	F	50	1.5	6.0	3.0	150				
★1N3880	S		1N3879	F	150	1.5	6.0	3.0	150				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N3881	S		1N3879	F	200	1.5	6.0	3.0	150				
★1N3882	S		1N3879	F	300	1.5	6.0	3.0	150				
★1N3883	S		1N3879	F	400	1.5	6.0	3.0	150				
1N3884	S			G	50	1.5	12	3.0	150				
1N3885	S			G	100	1.5	12	3.0	150				
1N3886	S			G	200	1.5	12	3.0	150				
1N3887	S			G	300	1.5	12	3.0	150				
1N3888	S			G	400	1.5	12	3.0	150				
★1N3889	S		1N3889	F	50	1.5	12	3.0	200				
★1N3890	S		1N3889	F	100	1.5	12	3.0	200				
★1N3891	S		1N3889	F	200	1.5	12	3.0	200				
★1N3892	S		1N3889	F	300	1.5	12	3.0	200				
★1N3893	S		1N3889	F	400	1.5	12	3.0	200				
1N3894	S			S	400	1.0	400m	0.2*					
1N3895	S			S	350	1.0	200m	0.5*					
1N3896	S			Z						0.77	50	5.0	250m
1N3897	S			Z						1.5	30	5.0	250m
1N3898	S	1N5221B	1N5221	Z						2.0	20	5.0	250m
★1N3899	S		1N3899	F	50	1.5	20	6.0	250				
★1N3900	S		1N3899	F	100	1.5	20	6.0	250				
★1N3901	S		1N3899	F	200	1.5	20	6.0	250				
★1N3902	S		1N3899	F	300	1.5	20	6.0	250				
★1N3903	S		1N3899	F	400	1.5	20	6.0	250				
1N3904	S			G	50	1.5	20	6.0	225				
1N3905	S			G	100	1.5	20	6.0	225				
1N3906	S			G	200	1.5	20	6.0	225				
1N3907	S			G	300	1.5	20	6.0	225				
1N3908	S			G	400	1.5	20	6.0	225				
★1N3909	S		1N3909	F	50	1.5	30	10	300				
★1N3910	S		1N3909	F	100	1.5	30	10	300				
★1N3911	S		1N3909	F	200	1.5	30	10	300				
★1N3912	S		1N3909	F	300	1.5	30	10	300				
★1N3913	S		1N3909	F	400	1.5	30	10	300				
1N3914	S			G	50	1.5	30	10	300				
1N3915	S			G	100	1.5	30	10	300				
1N3916	S			G	200	1.5	30	10	300				
1N3917	S			G	300	1.5	30	10	300				
1N3918	S			G	400	1.5	30	10	300				
1N3919	S			G	1000	2.0	5.0	0.5	100				
1N3920	S			G	1500	2.0	5.0	0.5	100				
1N3921	S			G	2000	2.0	5.0	0.5	100				
1N3922	S			G	2500	2.0	5.0	0.5	100				
1N3923	S			G	3000	2.0	5.0	0.5	100				
1N3924	S			G	1000	2.0	10	0.5	100				
1N3925	S			G	1500	2.0	10	0.5	100				
1N3926	S			G	2000	2.0	10	0.5	100				
1N3927	S			G	2500	2.0	10	0.5	100				
1N3928	S			G	3000	2.0	10	0.5	100				
1N3929	S			S	1000	2.0	1.0	10*					
1N3930	S			S	1500	2.0	1.0	10*					
1N3931	S			S	2000	2.0	1.0	10*					
1N3932	S			S	1500	2.0	1.0	10*					
1N3933	S			S	3000	2.0	1.0	10*					
1N3934	S			G	1200	2.5	1.0	0.4	50				
1N3935			Table 6	4									
thru													
1N3937			Table 6	4									
1N3938	S	1N4003	1N4001	G	200	1.1	2.0	0.4	30				
1N3939	S	1N4004	1N4001	G	400	1.1	2.0	0.2	30				
1N3940	S	1N4005	1N4001	G	600	1.1	2.0	0.2	30				
1N3941	S	1N4006	1N4001	G	800	1.5	2.0	0.2	30				
1N3942	S	1N4007	1N4001	G	1000	1.5	2.0	0.2	30				
1N3943	S			S	3.0	2.5	300m	100*					
1N3944	G			S	15	0.75	10m	2.5*	12				
1N3945			Table 3	V									
thru													
1N3947			Table 3	V									
1N3948	S			T									
1N3949	S	1N2984B	1N2970	Z						20	250	5.0	10W
1N3950	S	1N3796B	1N3785	Z						20	19	5.0	1.5W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N3951	S	1.5M25Z5		Z						25	15	5.0	1.5W
1N3952	S			S	130	0.74	10m	25n					
1N3953	G			S	40	0.5	35m	50*	300				
1N3954	S			S	50	1.0	200m	0.1*	4.0				
1N3955	S			G	100	1.3	70	15	1200				
1N3956	S			S	40	0.55	100*	0.05*	2.0				
1N3957	S			S	1000	1.0	400m	10*					
1N3958	S	1N3880	1N4933	G	100	1.3	3.5	0.4	35				
1N3959	S	1N3881	1N4933	G	200	1.3	3.5	0.4	35				
1N3960	S	1N3882	1N4933	G	300	1.3	3.5	0.4	35				
1N3961	S	1N3883	1N4933	G	400	1.3	3.5	0.4	35				
1N3962	S	MR1366	1N4933	G	500	1.3	3.5	0.4	35				
1N3963	S	MR1366	1N4933	G	600	1.3	3.5	0.4	35				
1N3964	S			G	200	1.6	22	1.0	200				
1N3965	S			G	400	1.6	22	1.0	200				
1N3966	S			G	600	1.6	22	1.0	200				
1N3967	S			G	800	1.6	22	1.0	200				
1N3968	S			G	200	1.6	50	2.0	600				
1N3969	S			G	400	1.6	50	2.0	600				
1N3970	S			G	600	1.6	50	2.0	600				
1N3971	S			G	800	1.6	50	2.0	600				
1N3972	S			G	200	1.5	104	5.0	1500				
1N3973	S			G	400	1.5	104	5.0	1500				
1N3974	S			G	600	1.5	104	5.0	1500				
1N3975	S			G	800	1.5	104	5.0	1500				
1N3976	S			G	200	1.5	250	10	4000				
1N3977	S			G	400	1.5	250	10	4000				
1N3978	S			G	600	1.5	250	10	4000				
1N3979	S			G	800	1.5	250	10	4000				
1N3981	S			S	200	1.0	900m	0.01m					
1N3982	S			S	400	1.0	900m	0.01m					
1N3983	S			S	600	1.0	900m	0.01m					
1N3984	S	1N3997A	1N3993	Z						5.5	1000	5.0	10W
1N3985	S	1N3998A	1N3993	Z						6.0	1000	5.0	10W
1N3986	S	1N3998A	1N3993	Z						6.2	805	5.0	10W
1N3987	S			G	700	1.4	6.0	0.9	150				
1N3988	S	MR1128	MR1120	G	800	1.4	6.0	0.8	150				
1N3989	S	MR1130	MR1120	G	900	1.4	6.0	0.7	150				
1N3990	S	MR1130	MR1120	G	1000	1.4	6.0	0.6	150				
1N3991	G			S	35	0.55	30m	1.0m	1.0				
1N3992	S			S	4000	5.0	250m	5.0*					
★1N3993	S		1N3993	Z						3.9	640	10	10W
★1N3993A	S		1N3993	Z						3.9	640	5.0	10W
★1N3994	S		1N3993	Z						4.3	580	10	10W
★1N3994A	S		1N3993	Z						4.3	580	5.0	10W
★1N3995	S		1N3993	Z						4.7	530	10	10W
★1N3995A	S		1N3993	Z						4.7	530	5.0	10W
★1N3996	S		1N3993	Z						5.1	490	10	10W
★1N3996A	S		1N3993	Z						5.1	490	5.0	10W
★1N3997	S		1N3993	Z						5.6	445	10	10W
★1N3997A	S		1N3993	Z						5.6	445	5.0	10W
★1N3998	S		1N3993	Z						6.2	405	10	10W
★1N3998A	S		1N3993	Z						6.2	405	5.0	10W
★1N3999	S		1N3993	Z						6.8	370	10	10W
★1N3999A	S		1N3993	Z						6.8	370	5.0	10W
★1N4000	S		1N3993	Z						7.5	335	10	10W
★1N4000A	S		1N3993	Z						7.5	335	5.0	10W
★1N4001	S		1N4001	G	50	1.1	1.0	0.03	30				
★1N4002	S		1N4001	G	100	1.1	1.0	0.03	30				
★1N4003	S		1N4001	G	200	1.1	1.0	0.03	30				
★1N4004	S		1N4001	G	400	1.1	1.0	0.03	30				
★1N4005	S		1N4001	G	600	1.1	1.0	0.03	30				
★1N4006	S		1N4001	G	800	1.1	1.0	0.03	30				
★1N4007	S		1N4001	G	1000	1.1	1.0	0.03	30				
1N4008	G			S	12	0.5	10m	0.1m	70				
1N4009	S			S	25	1.0	30m	0.1m	4.0				
1N4010	S	1N824	1N821	R						6.2	0.01	7.5	25/100
1N4011	S			G	1000	1.1	0.5	0.2	30				
1N4012	S			G	700	1.3	12	1.0	200				
1N4013	S			G	800	1.3	12	1.0	200				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N4014	S			G	900	1.3	12	1.0	200				
1N4015	S			G	1000	1.3	12	1.0	200				
1N4016	S	1N2972	1N2970	Z						8.2	150	20	5.0W
1N4016A	S	1N2972A	1N2970	Z						8.2	150	10	5.0W
1N4016B	S	1N2972B	1N2970	Z						8.2	150	5.0	5.0W
1N4017	S	1N2973	1N2970	Z						9.1	135	20	5.0W
1N4017A	S	1N2973A	1N2970	Z						9.1	135	10	5.0W
1N4017B	S	1N2973B	1N2970	Z						9.1	135	5.0	5.0W
1N4018	S	1N2974	1N2970	Z						10	125	20	5.0W
1N4018A	S	1N2974A	1N2970	Z						10	125	10	5.0W
1N4018B	S	1N2974B	1N2970	Z						10	125	5.0	5.0W
1N4019	S	1N2975	1N2970	Z						11	115	20	5.0W
1N4019A	S	1N2975A	1N2970	Z						11	115	10	5.0W
1N4019B	S	1N2975B	1N2970	Z						11	115	5.0	5.0W
1N4020	S	1N2976	1N2970	Z						12	105	20	5.0W
1N4020A	S	1N2976A	1N2970	Z						12	105	10	5.0W
1N4020B	S	1N2976B	1N2970	Z						12	105	5.0	5.0W
1N4021	S	1N2977	1N2970	Z						13	95	20	5.0W
1N4021A	S	1N2977A	1N2970	Z						13	95	10	5.0W
1N4021B	S	1N2977B	1N2970	Z						13	95	5.0	5.0W
1N4022	S	1N2979	1N2970	Z						15	85	20	5.0W
1N4022A	S	1N2979A	1N2970	Z						15	85	10	5.0W
1N4022B	S	1N2979B	1N2970	Z						15	85	5.0	5.0W
1N4023	S	1N2980	1N2970	Z						16	80	20	5.0W
1N4023A	S	1N2980A	1N2970	Z						16	80	10	5.0W
1N4023B	S	1N2980B	1N2970	Z						16	80	5.0	5.0W
1N4024	S	1N2982	1N2970	Z						18	70	20	5.0W
1N4024A	S	1N2982A	1N2970	Z						18	70	10	5.0W
1N4024B	S	1N2982B	1N2970	Z						18	70	5.0	5.0W
1N4025	S	1N2984	1N2970	Z						20	65	20	5.0W
1N4025A	S	1N2984A	1N2970	Z						20	65	10	5.0W
1N4025B	S	1N2984B	1N2970	Z						20	65	5.0	5.0W
1N4026	S	1N2985	1N2970	Z						22	55	20	5.0W
1N4026A	S	1N2985A	1N2970	Z						22	55	10	5.0W
1N4026B	S	1N2985B	1N2970	Z						22	55	5.0	5.0W
1N4027	S	1N2986	1N2970	Z						24	50	20	5.0W
1N4027A	S	1N2986A	1N2970	Z						24	50	10	5.0W
1N4027B	S	1N2986B	1N2970	Z						24	50	5.0	5.0W
1N4028	S	1N2988	1N2970	Z						27	45	20	5.0W
1N4028A	S	1N2988A	1N2970	Z						27	45	10	5.0W
1N4028B	S	1N2988B	1N2970	Z						27	45	5.0	5.0W
1N4029	S	1N2989	1N2970	Z						30	42	20	5.0W
1N4029A	S	1N2989A	1N2970	Z						30	42	10	5.0W
1N4029B	S	1N2989B	1N2970	Z						30	42	5.0	5.0W
1N4030	S	1N2990	1N2970	Z						33	38	20	5.0W
1N4030A	S	1N2990A	1N2970	Z						33	38	10	5.0W
1N4030B	S	1N2990B	1N2970	Z						33	38	5.0	5.0W
1N4031	S	1N2991	1N2970	Z						36	35	20	5.0W
1N4031A	S	1N2991A	1N2970	Z						36	35	10	5.0W
1N4031B	S	1N2992B	1N2970	Z						36	35	5.0	5.0W
1N4032	S	1N2992	1N2970	Z						39	32	20	5.0W
1N4032A	S	1N2992A	1N2970	Z						39	32	10	5.0W
1N4032B	S	1N2992B	1N2970	Z						39	32	5.0	5.0W
1N4033	S	1N2993	1N2970	Z						43	29	20	5.0W
1N4033A	S	1N2993A	1N2970	Z						43	29	10	5.0W
1N4033B	S	1N2993B	1N2970	Z						43	29	5.0	5.0W
1N4034	S	1N2995	1N2970	Z						47	27	20	5.0W
1N4034A	S	1N2995A	1N2970	Z						47	27	10	5.0W
1N4034B	S	1N2995B	1N2970	Z						47	27	5.0	5.0W
1N4035	S	1N2997	1N2970	Z						51	25	20	5.0W
1N4035A	S	1N2997A	1N2970	Z						51	25	10	5.0W
1N4035B	S	1N2997B	1N2970	Z						51	25	5.0	5.0W
1N4036	S	1N2999	1N2970	Z						56	22	20	5.0W
1N4036A	S	1N2999A	1N2970	Z						56	22	10	5.0W
1N4036B	S	1N2999B	1N2970	Z						56	22	5.0	5.0W
1N4037	S	1N3000	1N2970	Z						62	20	20	5.0W
1N4037A	S	1N3000A	1N2970	Z						62	20	10	5.0W
1N4037B	S	1N3000B	1N2970	Z						62	20	5.0	5.0W
1N4038	S	1N3001	1N2970	Z						68	18	20	5.0W
1N4038A	S	1N3001A	1N2970	Z						68	18	10	5.0W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N4038B	S	1N3001B	1N2970	Z						68	18	5.0	5.0W
1N4039	S	1N3002	1N2970	Z						75	17	20	5.0W
1N4039A	S	1N3002A	1N2970	Z						75	17	10	5.0W
1N4039B	S	1N3002B	1N2970	Z						75	17	5.0	5.0W
1N4040	S	1N3003	1N2970	Z						82	15	20	5.0W
1N4040A	S	1N3003A	1N2970	Z						82	15	10	5.0W
1N4040B	S	1N3003B	1N2970	Z						82	15	5.0	5.0W
1N4041	S	1N3004	1N2970	Z						91	14	20	5.0W
1N4041A	S	1N3004A	1N2970	Z						91	14	10	5.0W
1N4041B	S	1N3004B	1N2970	Z						91	14	5.0	5.0W
1N4042	S	1N3005	1N2970	Z						100	13	20	5.0W
1N4042A	S	1N3005A	1N2970	Z						100	13	10	5.0W
1N4042B	S	1N3005B	1N2970	Z						100	13	5.0	5.0W
1N4043	S			S	25	1.0	275	0.1*	2.0				
1N4044	S	MR1230SB	MR1230	G	50	1.35	275	15	5000				
1N4045	S	MR1231SB	MR1230	G	100	1.35	275	15	5000				
1N4046	S	MR1232SB	MR1230	G	150	1.35	275	15	5000				
1N4047	S	MR1233SB	MR1230	G	200	1.35	275	15	5000				
1N4048	S	MR1234SB	MR1230	G	250	1.35	275	15	5000				
1N4049	S	MR1235SB	MR1230	G	300	1.35	275	15	5000				
1N4050	S	MR1237SB	MR1230	G	400	1.35	275	15	5000				
1N4051	S	MR1238SB	MR1230	G	500	1.35	275	15	5000				
1N4052	S	MR1239SB	MR1230	G	600	1.35	275	15	5000				
1N4053	S			G	700	1.35	275	15	5000				
1N4054	S			G	800	1.35	275	15	5000				
1N4055	S			G	900	1.35	275	15	5000				
1N4056	S			G	1000	1.35	275	15	5000				
★1N4057	S		1N429	R						12.4	0.005	10	-55/100
★1N4057A	S		1N429	R						12.4	0.002	10	-55/100
★1N4058	S		1N429	R						14.6	0.005	10	-55/100
★1N4058A	S		1N429	R						14.6	0.002	10	-55/100
★1N4059	S		1N429	R						16.8	0.005	10	-55/100
★1N4059A	S		1N429	R						16.8	0.002	10	-55/100
★1N4060	S		1N429	R						18.5	0.005	10	-55/100
★1N4060A	S		1N429	R						18.5	0.002	10	-55/100
★1N4061	S		1N429	R						21	0.005	10	-55/100
★1N4061A	S		1N429	R						21	0.002	10	-55/100
★1N4062	S		1N429	R						23	0.005	10	-55/100
★1N4062A	S		1N429	R						23	0.002	10	-55/100
★1N4063	S		1N429	R						27	0.005	10	-55/100
★1N4063A	S		1N429	R						27	0.002	10	-55/100
★1N4064	S		1N429	R						30	0.005	10	-55/100
★1N4064A	S		1N429	R						30	0.002	10	-55/100
★1N4065	S		1N429	R						33	0.005	10	-55/100
★1N4065A	S		1N429	R						33	0.002	10	-55/100
★1N4066	S		1N429	R						37	0.005	7.5	-55/100
★1N4066A	S		1N429	R						37	0.002	7.5	-55/100
★1N4067	S		1N429	R						43	0.005	7.5	-55/100
★1N4067A	S		1N429	R						43	0.002	7.5	-55/100
★1N4068	S		1N429	R						47	0.005	7.5	-55/100
★1N4068A	S		1N429	R						47	0.002	7.5	-55/100
★1N4069	S		1N429	R						51	0.005	7.5	-55/100
★1N4069A	S		1N429	R						51	0.002	7.5	-55/100
★1N4070	S		1N429	R						56	0.005	7.5	-55/100
★1N4070A	S		1N429	R						56	0.002	7.5	-55/100
★1N4071	S		1N429	R						62	0.005	7.5	-55/100
★1N4071A	S		1N429	R						62	0.002	7.5	-55/100
★1N4072	S		1N429	R						68	0.005	5.0	-55/100
★1N4072A	S		1N429	R						68	0.002	5.0	-55/100
★1N4073	S		1N429	R						75	0.005	5.0	-55/100
★1N4073A	S		1N429	R						75	0.002	5.0	-55/100
★1N4074	S		1N429	R						82	0.005	5.0	-55/100
★1N4074A	S		1N429	R						82	0.002	5.0	-55/100
★1N4075	S		1N429	R						87	0.005	5.0	-55/100
★1N4075A	S		1N429	R						87	0.002	5.0	-55/100
★1N4076	S		1N429	R						91	0.005	5.0	-55/100
★1N4076A	S		1N429	R						91	0.002	5.0	-55/100
★1N4077	S		1N429	R						100	0.002	5.0	-55/100
★1N4077A	S		1N429	R						100	0.002	5.0	-55/100
★1N4078	S		1N429	R						105	0.005	2.5	-55/100

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N4078A	S		1N429	R						105	0.002	2.5	-55/100
★1N4079	S		1N429	R						110	0.005	2.5	-55/100
★1N4079A	S		1N429	R						110	0.002	2.5	-55/100
★1N4080	S		1N429	R						120	0.005	2.5	-55/100
★1N4080A	S		1N429	R						120	0.002	2.5	-55/100
★1N4081	S		1N429	R						130	0.005	2.5	-55/100
★1N4081A	S		1N429	R						130	0.002	2.5	-55/100
★1N4082	S		1N429	R						140	0.005	25	-55/100
★1N4082A	S		1N429	R						140	0.002	25	-55/100
★1N4083	S		1N429	R						150	0.005	25	-55/100
★1N4083A	S		1N429	R						150	0.002	25	-55/100
★1N4084	S		1N429	R						175	0.005	25	-55/100
★1N4084A	S		1N429	R						175	0.002	25	-55/100
★1N4085	S		1N429	R						200	0.005	25	-55/100
★1N4085A	S		1N429	R						200	0.002	25	-55/100
1N4086	S			S	70	1.0	200m	0.25m	200				
1N4087	S			S	50	0.975	30m	90n	2.5				
1N4088	G			S	30	1.0	100m	0.2m					
1N4089	S			G	400	1.2	400	0.2	75				
1N4090	G			B									
1N4091			Table 3	V									
1N4092	S			S			1.0	5.0m	1.0*				
1N4093	S			S	50		1.0	5.0m	1.0				
1N4094	S	1N2624B	1N2620	R						9.6			
1N4095	S	1N5231A	1N5221	Z						5.0	5.0	10	330m
1N4096	S	1N4763A	1N4728	Z						90	8.0	5.0	3.0W
1N4097	S	1N4764A	1N4728	Z						100	5.0	5.0	3.0W
1N4098	S	1M150ZS5	1N4728	Z						150	5.0	5.0	3.0W
★1N4099	S		1N4099	Z						6.8	0.25	5.0	250m
★1N4100	S		1N4099	Z						7.5	0.25	5.0	250m
★1N4101	S		1N4099	Z						8.2	0.25	5.0	250m
★1N4102	S		1N4099	Z						8.7	0.25	5.0	250m
★1N4103	S		1N4099	Z						9.1	0.25	5.0	250m
★1N4104	S		1N4099	Z						10	0.25	5.0	250m
★1N4105	S		1N4099	Z						11	0.25	5.0	250m
★1N4106	S		1N4099	Z						12	0.25	5.0	250m
★1N4107	S		1N4099	Z						13	0.25	5.0	250m
★1N4108	S		1N4099	Z						14	0.25	5.0	250m
★1N4109	S		1N4099	Z						15	0.25	5.0	250m
★1N4110	S		1N4099	Z						16	0.25	5.0	250m
★1N4111	S		1N4099	Z						17	0.25	5.0	250m
★1N4112	S		1N4099	Z						18	0.25	5.0	250m
★1N4113	S		1N4099	Z						19	0.25	5.0	250m
★1N4114	S		1N4099	Z						20	0.25	5.0	250m
★1N4115	S		1N4099	Z						22	0.25	5.0	250m
★1N4116	S		1N4099	Z						24	0.25	5.0	250m
★1N4117	S		1N4099	Z						25	0.25	5.0	250m
★1N4118	S		1N4099	Z						27	0.25	5.0	250m
★1N4119	S		1N4099	Z						28	0.25	5.0	250m
★1N4120	S		1N4099	Z						30	0.25	5.0	250m
★1N4121	S		1N4099	Z						33	0.25	5.0	250m
★1N4122	S		1N4099	Z						36	0.25	5.0	250m
★1N4123	S		1N4099	Z						39	0.25	5.0	250m
★1N4124	S		1N4099	Z						43	0.25	5.0	250m
★1N4125	S		1N4099	Z						47	0.25	5.0	250m
★1N4126	S		1N4099	Z						51	0.25	5.0	250m
★1N4127	S		1N4099	Z						56	0.25	5.0	250m
★1N4128	S		1N4099	Z						60	0.25	5.0	250m
★1N4129	S		1N4099	Z						62	0.25	5.0	250m
★1N4130	S		1N4099	Z						68	0.25	5.0	250m
★1N4131	S		1N4099	Z						75	0.25	5.0	250m
★1N4132	S		1N4099	Z						82	0.25	5.0	250m
★1N4133	S		1N4099	Z						87	0.25	5.0	250m
★1N4134	S		1N4099	Z						91	0.25	5.0	250m
★1N4135	S		1N4099	Z						100	0.25	5.0	250m
1N4136	S			G	200	1.6	70	16	750				
1N4137	S			G	400	1.6	70	12	750				
1N4138	S			G	600	1.6	70	8.0	750				
1N4139	S	1N4719	1N4719	G	50	1.0	3.0	0.1	300				
1N4140	S	1N4720	1N4719	G	100	1.0	3.0	0.1	300				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N4141	S	1N4721	1N4719	G	200	1.0	3.0	0.1	300				
1N4142	S	1N4722	1N4719	G	400	1.0	3.0	0.1	300				
1N4143	S	1N4723	1N4719	G	600	1.0	3.0	0.1	300				
1N4144	S	1N4724	1N4719	G	800	1.0	3.0	0.1	300				
1N4145	S	1N4725	1N4719	G	1000	1.0	3.0	0.1	300				
1N4146	S			G	1200	1.0	3.0	0.1	300				
1N4147	S			S	30	1.0	30m	0.1*	10				
1N4148	S			S	75	1.0	10m	25n	4.0				
1N4149	S			S	75	1.0	10m	25n	4.0				
1N4150	S			S	50	1.0	200m	0.1*	6.0				
1N4151	S			S	50	1.0	50m	50n	2.0				
1N4152	S			S	30	0.88	20m	50n	2.0				
1N4153	S			S	50	0.88	20m	50n	2.0				
1N4154	S			S	25	1.0	30m	0.1*	4.0				
1N4155	S			S	400	1.0	100m	0.1*	10				
1N4156	S			S	20	1.84	0.1	50n					
1N4157	S			S	20	2.66	0.1	50n					
1N4158	S	1N4736	1N4728	Z						6.8	37	20	1.0W
1N4158A	S	1N4736	1N4728	Z						6.8	37	10	1.0W
1N4158B	S	1N4736A	1N4728	Z						6.8	37	5.0	1.0W
1N4159	S	1N4737	1N4728	Z						7.5	34	20	1.0W
1N4159A	S	1N4737	1N4728	Z						7.5	34	10	1.0W
1N4159B	S	1N4737A	1N4728	Z						7.5	34	5.0	1.0W
1N4160	S	1N4738	1N4728	Z						8.2	31	20	1.0W
1N4160A	S	1N4738	1N4728	Z						8.2	31	10	1.0W
1N4160B	S	1N4738A	1N4728	Z						8.2	31	5.0	1.0W
1N4161	S	1N4739	1N4728	Z						9.1	28	20	1.0W
1N4161A	S	1N4739	1N4728	Z						9.1	28	10	1.0W
1N4161B	S	1N4739A	1N4728	Z						9.1	28	5.0	1.0W
1N4162	S	1N4740	1N4728	Z						10	25	20	1.0W
1N4162A	S	1N4740	1N4728	Z						10	25	10	1.0W
1N4162B	S	1N4740A	1N4728	Z						10	25	5.0	1.0W
1N4163	S	1N4741	1N4728	Z						11	23	20	1.0W
1N4163A	S	1N4741	1N4728	Z						11	23	10	1.0W
1N4163B	S	1N4741A	1N4728	Z						11	23	5.0	1.0W
1N4164	S	1N4742	1N4728	Z						12	21	20	1.0W
1N4164A	S	1N4742	1N4728	Z						12	21	10	1.0W
1N4164B	S	1N4742A	1N4728	Z						12	21	5.0	1.0W
1N4165	S	1N4743	1N4728	Z						13	19	20	1.0W
1N4165A	S	1N4743	1N4728	Z						13	19	10	1.0W
1N4165B	S	1N4743A	1N4728	Z						13	19	5.0	1.0W
1N4166	S	1N4744	1N4728	Z						15	17	20	1.0W
1N4166A	S	1N4744	1N4728	Z						15	17	10	1.0W
1N4166B	S	1N4744A	1N4728	Z						15	17	5.0	1.0W
1N4167	S	1N4745	1N4728	Z						16	16	20	1.0W
1N4167A	S	1N4745	1N4728	Z						16	16	10	1.0W
1N4167B	S	1N4745A	1N4728	Z						16	16	5.0	1.0W
1N4168	S	1N4746	1N4728	Z						18	14	20	1.0W
1N4168A	S	1N4746	1N4728	Z						18	14	10	1.0W
1N4168B	S	1N4746A	1N4728	Z						18	14	5.0	1.0W
1N4169	S	1N4747	1N4728	Z						20	13	20	1.0W
1N4169A	S	1N4747	1N4728	Z						20	13	10	1.0W
1N4169B	S	1N4747A	1N4728	Z						20	13	5.0	1.0W
1N4170	S	1N4748	1N4728	Z						22	12	20	1.0W
1N4170A	S	1N4748	1N4728	Z						22	12	10	1.0W
1N4170B	S	1N4748A	1N4728	Z						22	12	5.0	1.0W
1N4171	S	1N4749	1N4728	Z						24	11	20	1.0W
1N4171A	S	1N4749	1N4728	Z						24	11	10	1.0W
1N4171B	S	1N4749A	1N4728	Z						24	11	5.0	1.0W
1N4172	S	1N4750	1N4718	Z						27	9.5	20	1.0W
1N4172A	S	1N4750	1N4728	Z						27	9.5	10	1.0W
1N4172B	S	1N4750A	1N4728	Z						27	9.5	5.0	1.0W
1N4173	S	1N4751	1N4728	Z						30	8.5	20	1.0W
1N4173A	S	1N4751	1N4728	Z						30	8.5	10	1.0W
1N4173B	S	1N4751A	1N4728	Z						30	8.5	5.0	1.0W
1N4174	S	1N4752	1N4728	Z						33	7.5	20	1.0W
1N4174A	S	1N4752	1N4728	Z						33	7.5	10	1.0W
1N4174B	S	1N4752A	1N4728	Z						33	7.5	5.0	1.0W
1N4175	S	1N4753	1N4728	Z						36	7.0	20	1.0W
1N4175A	S	1N4753	1N4728	Z						36	7.0	10	1.0W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N4175B	S	1N4753A	1N4728	Z						36	7.0	5.0	1.0W
1N4176	S	1N4754	1N4728	Z						39	6.5	20	1.0W
1N4176A	S	1N4754	1N4728	Z						39	6.5	10	1.0W
1N4176B	S	1N4754A	1N4728	Z						39	6.5	5.0	1.0W
1N4177	S	1N4755	1N4728	Z						43	6.0	20	1.0W
1N4177A	S	1N4755	1N4728	Z						43	6.0	10	1.0W
1N4177B	S	1N4755A	1N4728	Z						43	6.0	5.0	1.0W
1N4178	S	1N4756	1N4728	Z						47	5.5	20	1.0W
1N4178A	S	1N4756	1N4728	Z						47	5.5	10	1.0W
1N4178B	S	1N4756A	1N4728	Z						47	5.5	5.0	1.0W
1N4179	S	1N4757	1N4728	Z						51	5.0	20	1.0W
1N4179A	S	1N4757	1N4728	Z						51	5.0	10	1.0W
1N4179B	S	1N4757A	1N4728	Z						51	5.0	5.0	1.0W
1N4180	S	1N4758	1N4728	Z						56	4.5	20	1.0W
1N4180A	S	1N4758	1N4728	Z						56	4.5	10	1.0W
1N4180B	S	1N4758A	1N4728	Z						56	4.5	5.0	1.0W
1N4181	S	1N4759	1N4728	Z						62	4.0	20	1.0W
1N4181A	S	1N4759	1N4728	Z						62	4.0	10	1.0W
1N4181B	S	1N4759A	1N4728	Z						62	4.0	5.0	1.0W
1N4182	S	1N4760	1N4728	Z						68	3.7	20	1.0W
1N4182A	S	1N4760	1N4728	Z						68	3.7	10	1.0W
1N4182B	S	1N4760A	1N4728	Z						68	3.7	5.0	1.0W
1N4183	S	1N4761	1N4728	Z						75	3.3	20	1.0W
1N4183A	S	1N4761	1N4728	Z						75	3.3	10	1.0W
1N4183B	S	1N4761A	1N4728	Z						75	3.3	5.0	1.0W
1N4184	S	1N4762	1N4728	Z						82	3.0	20	1.0W
1N4184A	S	1N4762	1N4728	Z						82	3.0	10	1.0W
1N4184B	S	1N4762A	1N4728	Z						82	3.0	5.0	1.0W
1N4185	S	1N4763	1N4728	Z						91	2.8	20	1.0W
1N4185A	S	1N4763	1N4728	Z						91	2.8	10	1.0W
1N4185B	S	1N4763A	1N4728	Z						91	2.8	5.0	1.0W
1N4186	S	1N4764	1N4728	Z						100	2.5	20	1.0W
1N4186A	S	1N4764	1N4728	Z						100	2.5	10	1.0W
1N4186B	S	1N4764A	1N4728	Z						100	2.5	5.0	1.0W
1N4187	S		1N4728	Z						110	2.3	20	1.0W
1N4187A	S		1N4728	Z						110	2.3	10	1.0W
1N4187B	S		1N4728	Z						110	2.3	5.0	1.0W
1N4188	S		1N4728	Z						120	2.0	20	1.0W
1N4188A	S		1N4728	Z						120	2.0	10	1.0W
1N4188B	S		1N4728	Z						120	2.0	5.0	1.0W
1N4189	S		1N4728	Z						130	1.9	20	1.0W
1N4189A	S		1N4728	Z						130	1.9	10	1.0W
1N4189B	S		1N4728	Z						130	1.9	5.0	1.0W
1N4190	S		1N4728	Z						150	1.7	20	1.0W
1N4190A	S		1N4728	Z						150	1.7	10	1.0W
1N4190B	S		1N4728	Z						150	1.7	5.0	1.0W
1N4191	S		1N4728	Z						160	1.6	20	1.0W
1N4191A	S		1N4728	Z						160	1.6	10	1.0W
1N4191B	S		1N4728	Z						160	1.6	5.0	1.0W
1N4192	S		1N4728	Z						180	1.4	20	1.0W
1N4192A	S		1N4728	Z						180	1.4	10	1.0W
1N4192B	S		1N4728	Z						180	1.4	5.0	1.0W
1N4193	S		1N4728	Z						200	1.2	20	1.0W
1N4193A	S		1N4728	Z						200	1.2	10	1.0W
1N4193B	S		1N4728	Z						200	1.2	5.0	1.0W
1N4194	S	1N2970	1N2970	Z						6.8	370	20	10W
1N4194A	S	1N2970A	1N2970	Z						6.8	370	10	10W
1N4194B	S	1N2970B	1N2970	Z						6.8	370	5.0	10W
1N4195	S	1N2971	1N2970	Z						7.5	335	20	10W
1N4195A	S	1N2971A	1N2970	Z						7.5	335	10	10W
1N4195B	S	1N2971B	1N2970	Z						7.5	335	5.0	10W
1N4196	S	1N2972	1N2970	Z						8.2	305	20	10W
1N4196A	S	1N2972A	1N2970	Z						8.2	305	10	10W
1N4196B	S	1N2972B	1N2970	Z						8.2	305	5.0	10W
1N4197	S	1N2973	1N2970	Z						9.1	275	20	10W
1N4197A	S	1N2973A	1N2970	Z						9.1	275	10	10W
1N4197B	S	1N2973B	1N2970	Z						9.1	275	5.0	10W
1N4198	S	1N2974	1N2970	Z						10	250	20	10W
1N4198A	S	1N2974A	1N2970	Z						10	250	10	10W
1N4198B	S	1N2974B	1N2970	Z						10	250	5.0	10W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N4199	S	1N2975	1N2970	Z						11	230	20	10W
1N4199A	S	1N2975A	1N2970	Z						11	230	10	10W
1N4199B	S	1N2975B	1N2970	Z						11	230	5.0	10W
1N4200	S	1N2976	1N2970	Z						12	210	20	10W
1N4200A	S	1N2976A	1N2970	Z						12	210	10	10W
1N4200B	S	1N2976B	1N2970	Z						12	210	5.0	10W
1N4201	S	1N2977	1N2970	Z						13	190	20	10W
1N4201A	S	1N2977A	1N2970	Z						13	190	10	10W
1N4201B	S	1N2977B	1N2970	Z						13	190	5.0	10W
1N4202	S	1N2978	1N2970	Z						14	180	20	10W
1N4202A	S	1N2978A	1N2970	Z						14	180	10	10W
1N4202B	S	1N2978B	1N2970	Z						14	180	5.0	10W
1N4203	S	1N2979	1N2970	Z						15	170	20	10W
1N4203A	S	1N2979A	1N2970	Z						15	170	10	10W
1N4203B	S	1N2979B	1N2970	Z						15	170	5.0	10W
1N4204	S	1N2980	1N2970	Z						16	155	20	10W
1N4204A	S	1N2980A	1N2970	Z						16	155	10	10W
1N4204B	S	1N2980B	1N2970	Z						16	155	5.0	10W
1N4205	S	1N2981	1N2970	Z						17	145	20	10W
1N4205A	S	1N2981A	1N2970	Z						17	145	10	10W
1N4205B	S	1N2981B	1N2970	Z						17	145	5.0	10W
1N4206	S	1N2982	1N2970	Z						18	140	20	10W
1N4206A	S	1N2982A	1N2970	Z						18	140	10	10W
1N4206B	S	1N2982B	1N2970	Z						18	140	5.0	10W
1N4207	S	1N2983	1N2970	Z						19	130	20	10W
1N4207A	S	1N2983A	1N2970	Z						19	130	10	10W
1N4207B	S	1N2983B	1N2970	Z						19	130	5.0	10W
1N4208	S	1N2984	1N2970	Z						20	125	20	10W
1N4208A	S	1N2984A	1N2970	Z						20	125	10	10W
1N4208B	S	1N2984B	1N2970	Z						20	125	5.0	10W
1N4209	S	1N2985	1N2970	Z						22	115	20	10W
1N4209A	S	1N2985A	1N2970	Z						22	115	10	10W
1N4209B	S	1N2985B	1N2970	Z						22	115	5.0	10W
1N4210	S	1N2986	1N2970	Z						24	105	20	10W
1N4210A	S	1N2986A	1N2970	Z						24	105	10	10W
1N4210B	S	1N2986B	1N2970	Z						24	105	5.0	10W
1N4211	S	1N2987	1N2970	Z						25	100	20	10W
1N4211A	S	1N2987A	1N2970	Z						25	100	10	10W
1N4211B	S	1N2987B	1N2970	Z						25	100	5.0	10W
1N4212	S	1N2988	1N2970	Z						27	95	20	10W
1N4212A	S	1N2988A	1N2970	Z						27	95	10	10W
1N4212B	S	1N2988B	1N2970	Z						27	95	5.0	10W
1N4213	S	1N2989	1N2970	Z						30	85	20	10W
1N4213A	S	1N2989A	1N2970	Z						30	85	10	10W
1N4213B	S	1N2989B	1N2970	Z						30	85	5.0	10W
1N4214	S	1N2990	1N2970	Z						33	75	20	10W
1N4214A	S	1N2990A	1N2970	Z						33	75	10	10W
1N4214B	S	1N2990B	1N2970	Z						33	75	5.0	10W
1N4215	S	1N2991	1N2970	Z						36	70	20	10W
1N4215A	S	1N2991A	1N2970	Z						36	70	10	10W
1N4215B	S	1N2991B	1N2970	Z						36	70	5.0	10W
1N4216	S	1N2992	1N2970	Z						39	65	20	10W
1N4216A	S	1N2992A	1N2970	Z						39	65	10	10W
1N4216B	S	1N2992B	1N2970	Z						39	65	5.0	10W
1N4217	S	1N2993	1N2970	Z						43	60	20	10W
1N4217A	S	1N2993A	1N2970	Z						43	60	10	10W
1N4217B	S	1N2993B	1N2970	Z						43	60	5.0	10W
1N4218	S	1N2994	1N2970	Z						45	55	20	10W
1N4218A	S	1N2994A	1N2970	Z						45	55	10	10W
1N4218B	S	1N2994B	1N2970	Z						45	55	5.0	10W
1N4219	S	1N2995	1N2970	Z						47	55	20	10W
1N4219A	S	1N2995A	1N2970	Z						47	55	10	10W
1N4219B	S	1N2995B	1N2970	Z						47	55	5.0	10W
1N4220	S	1N2996	1N2970	Z						50	50	20	10W
1N4220A	S	1N2996A	1N2970	Z						50	50	10	10W
1N4220B	S	1N2996B	1N2970	Z						50	50	5.0	10W
1N4221	S	1N2997	1N2970	Z						51	50	20	10W
1N4221A	S	1N2997A	1N2970	Z						51	50	10	10W
1N4221B	S	1N2997B	1N2970	Z						51	50	5.0	10W
1N4222	S	1N2998	1N2970	Z						52	50	20	10W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N4222A	S	1N2998A	1N2970	Z						52	50	10	10W
1N4222B	S	1N2998B	1N2970	Z						52	50	5.0	10W
1N4223	S	1N2999	1N2970	Z						56	45	20	10W
1N4223A	S	1N2999A	1N2970	Z						56	45	10	10W
1N4223B	S	1N2999B	1N2970	Z						56	45	5.0	10W
1N4224	S	1N3000	1N2970	Z						62	40	20	10W
1N4224A	S	1N3000A	1N2970	Z						62	40	10	10W
1N4224B	S	1N3000B	1N2970	Z						62	40	5.0	10W
1N4225	S	1N3001	1N2970	Z						68	37	20	10W
1N4225A	S	1N3001A	1N2970	Z						68	37	10	10W
1N4225B	S	1N3001B	1N2970	Z						68	37	5.0	10W
1N4226	S	1N3002	1N2970	Z						75	33	20	10W
1N4226A	S	1N3002A	1N2970	Z						75	33	10	10W
1N4226B	S	1N3002B	1N2970	Z						75	33	5.0	10W
1N4227	S	1N3003	1N2970	Z						82	30	20	10W
1N4227A	S	1N3003A	1N2970	Z						82	30	10	10W
1N4227B	S	1N3003B	1N2970	Z						82	30	5.0	10W
1N4228	S	1N3004	1N2970	Z						91	28	20	10W
1N4228A	S	1N3004A	1N2970	Z						91	28	10	10W
1N4228B	S	1N3004B	1N2970	Z						91	28	5.0	10W
1N4229	S	1N3005	1N2970	Z						100	25	20	10W
1N4229A	S	1N3005A	1N2970	Z						100	25	10	10W
1N4229B	S	1N3005B	1N2970	Z						100	25	5.0	10W
1N4230	S	1N3006	1N2970	Z						105	25	20	10W
1N4230A	S	1N3006A	1N2970	Z						105	25	10	10W
1N4230B	S	1N3006B	1N2970	Z						105	25	5.0	10W
1N4231	S	1N3007	1N2970	Z						110	23	20	10W
1N4231A	S	1N3007A	1N2970	Z						110	23	10	10W
1N4231B	S	1N3007B	1N2970	Z						110	23	5.0	10W
1N4232	S	1N3008	1N2970	Z						120	20	20	10W
1N4232A	S	1N3008A	1N2970	Z						120	20	10	10W
1N4232B	S	1N3008B	1N2970	Z						120	20	5.0	10W
1N4233	S	1N3009	1N2970	Z						130	19	20	10W
1N4233A	S	1N3009A	1N2970	Z						130	19	10	10W
1N4233B	S	1N3009B	1N2970	Z						130	19	5.0	10W
1N4234	S	1N3010	1N2970	Z						140	18	20	10W
1N4234A	S	1N3010A	1N2970	Z						140	18	10	10W
1N4234B	S	1N3010B	1N2970	Z						140	18	5.0	10W
1N4235	S	1N3011	1N2970	Z						150	17	20	10W
1N4235A	S	1N3011A	1N2970	Z						150	17	10	10W
1N4235B	S	1N3011B	1N2970	Z						150	17	5.0	10W
1N4236	S	1N3012	1N2970	Z						160	16	20	10W
1N4236A	S	1N3012A	1N2970	Z						160	16	10	10W
1N4236B	S	1N3012B	1N2970	Z						160	16	5.0	10W
1N4237	S	1N3013	1N2970	Z						175	14	20	10W
1N4237A	S	1N3013A	1N2970	Z						175	14	10	10W
1N4237B	S	1N3013B	1N2970	Z						175	14	5.0	10W
1N4238	S	1N3014	1N2970	Z						180	14	20	10W
1N4238A	S	1N3014A	1N2970	Z						180	14	10	10W
1N4238B	S	1N3014B	1N2970	Z						180	14	5.0	10W
1N4239	S	1N3015	1N2970	Z						200	12	20	10W
1N4239A	S	1N3015A	1N2970	Z						200	12	10	10W
1N4239B	S	1N3015B	1N2970	Z						200	12	5.0	10W
1N4240	S			Z						400	5.0	2.0	10W
1N4241	S			Z						350	6.0	2.0	10W
1N4242	S			S	40	1.0	20m	0.1n	2.0				
1N4243	S			S	40	1.0	10m	0.1n	2.0				
1N4244	S			S	10	1.0	20m	0.1*	0.75				
1N4245	S	1N4003	1N4001	G	200	1.64	1.0	0.05	25				
1N4246	S	1N4004	1N4001	G	400	1.64	1.0	0.05	25				
1N4247	S	1N4005	1N4001	G	600	1.64	1.0	0.05	25				
1N4248	S	1N4006	1N4001	G	800	1.64	1.0	0.05	25				
1N4249	S	1N4007	1N4001	G	1000	1.64	1.0	0.05	25				
1N4250	S	1N4006	1N4001	G	800		0.5	0.05	10				
1N4251	S	1N4007	1N4001	G	1000		0.5	0.05	10				
1N4252	S	MR1-1200	MR1-1200	G	1200		0.5	0.05	10				
1N4253	S	MR1-1600	MR1-1200	G	1500		0.5	0.05	10				
1N4254	S	MR991A	MR990A	G	1500	4.8	0.25	0.05	6.25				
1N4255	S	MR992A	MR990A	G	2000	4.8	0.25	0.05	6.25				
1N4256	S	MR993A	MR990A	G	2500	4.8	0.25	0.05	6.25				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N4257	S	MR994A	MR990A	G	3000	4.8	0.25	0.05	6.25				
1N4258	S	1N2970	1N2970	Z						6.8	370	20	10W
1N4258A	S	1N2970A	1N2970	Z						6.8	370	10	10W
1N4258B	S	1N2970B	1N2970	Z						6.8	370	5.0	10W
1N4259	S	1N2971	1N2970	Z						7.5	335	20	10W
1N4259A	S	1N2971A	1N2970	Z						7.5	335	10	10W
1N4259B	S	1N2971B	1N2970	Z						7.5	335	5.0	10W
1N4260	S	1N2972	1N2970	Z						8.2	305	20	10W
1N4260A	S	1N2972A	1N2970	Z						8.2	305	10	10W
1N4260B	S	1N2972B	1N2970	Z						8.2	305	5.0	10W
1N4261	S	1N2973	1N2970	Z						9.1	275	20	10W
1N4261A	S	1N2973A	1N2970	Z						9.1	275	10	10W
1N4261B	S	1N2973B	1N2970	Z						9.1	275	5.0	10W
1N4262	S	1N2974	1N2970	Z						10	250	20	10W
1N4262A	S	1N2974A	1N2970	Z						10	250	10	10W
1N4262B	S	1N2974B	1N2970	Z						10	250	5.0	10W
1N4263	S	1N2975	1N2970	Z						11	230	20	10W
1N4263A	S	1N2975A	1N2970	Z						11	230	10	10W
1N4263B	S	1N2975B	1N2970	Z						11	230	5.0	10W
1N4264	S	1N2976	1N2970	Z						12	210	20	10W
1N4264A	S	1N2976A	1N2970	Z						12	210	10	10W
1N4264B	S	1N2976B	1N2970	Z						12	210	5.0	10W
1N4265	S	1N2977	1N2970	Z						13	190	20	10W
1N4265A	S	1N2977A	1N2970	Z						13	190	10	10W
1N4265B	S	1N2977B	1N2970	Z						13	190	5.0	10W
1N4266	S	1N2979	1N2970	Z						15	170	20	10W
1N4266A	S	1N2979A	1N2970	Z						15	170	10	10W
1N4266B	S	1N2979B	1N2970	Z						15	170	5.0	10W
1N4267	S	1N2980	1N2970	Z						16	155	20	10W
1N4267A	S	1N2980A	1N2970	Z						16	155	10	10W
1N4267B	S	1N2980B	1N2970	Z						16	155	5.0	10W
1N4268	S	1N2982	1N2970	Z						18	140	20	10W
1N4268A	S	1N2982A	1N2970	Z						18	140	10	10W
1N4268B	S	1N2982B	1N2970	Z						18	140	5.0	10W
1N4269	S	1N2984	1N2970	Z						20	125	20	10W
1N4269A	S	1N2984A	1N2970	Z						20	125	10	10W
1N4269B	S	1N2984B	1N2970	Z						20	125	5.0	10W
1N4270	S	1N2985	1N2979	Z						22	115	20	10W
1N4270A	S	1N2985A	1N2970	Z						22	115	10	10W
1N4270B	S	1N2985B	1N2970	Z						22	115	5.0	10W
1N4271	S	1N2986	1N2970	Z						24	105	20	10W
1N4271A	S	1N2986A	1N2970	Z						24	105	10	10W
1N4271B	S	1N2986B	1N2970	Z						24	105	5.0	10W
1N4272	S	1N2988	1N2970	Z						27	95	20	10W
1N4272A	S	1N2988A	1N2970	Z						27	95	10	10W
1N4272B	S	1N2988B	1N2970	Z						27	95	5.0	10W
1N4273	S	1N2989	1N2970	Z						30	85	20	10W
1N4273A	S	1N2989A	1N2970	Z						30	85	10	10W
1N4273B	S	1N2989B	1N2970	Z						30	85	5.0	10W
1N4274	S	1N2990	1N2970	Z						33	75	20	10W
1N4274A	S	1N2990A	1N2970	Z						33	75	10	10W
1N4274B	S	1N2990B	1N2970	Z						33	75	5.0	10W
1N4275	S	1N2991	1N2970	Z						36	70	20	10W
1N4275A	S	1N2991A	1N2970	Z						36	70	10	10W
1N4275B	S	1N2991B	1N2970	Z						36	70	5.0	10W
1N4276	S	1N2992	1N2970	Z						39	65	20	10W
1N4276A	S	1N2992A	1N2970	Z						39	65	10	10W
1N4276B	S	1N2992B	1N2970	Z						39	65	5.0	10W
1N4277	S	1N2993	1N2970	Z						43	60	20	10W
1N4277A	S	1N2993A	1N2970	Z						43	60	10	10W
1N4277B	S	1N2993B	1N2970	Z						43	60	5.0	10W
1N4278	S	1N2995	1N2970	Z						47	55	20	10W
1N4278A	S	1N2995A	1N2970	Z						47	55	10	10W
1N4278B	S	1N2995B	1N2970	Z						47	55	5.0	10W
1N4279	S	1N2997	1N2970	Z						51	55	20	10W
1N4279A	S	1N2997A	1N2970	Z						51	55	10	10W
1N4279B	S	1N2997B	1N2970	Z						51	55	5.0	10W
1N4280	S	1N2999	1N2970	Z						56	45	20	10W
1N4280A	S	1N2999A	1N2970	Z						56	45	10	10W
1N4280B	S	1N2999B	1N2970	Z						56	45	5.0	10W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N4281	S	1N3000	1N2970	Z						62	40	20	10W
1N4281A	S	1N3000A	1N2970	Z						62	40	10	10W
1N4281B	S	1N3000B	1N2970	Z						62	40	5.0	10W
1N4282	S	1N3001	1N2970	Z						68	37	20	10W
1N4282A	S	1N3001A	1N2970	Z						68	37	10	10W
1N4282B	S	1N3001B	1N2970	Z						68	37	5.0	10W
1N4283	S	1N3002	1N2970	Z						75	33	20	10W
1N4283A	S	1N3002A	1N2970	Z						75	33	10	10W
1N4283B	S	1N3002B	1N2970	Z						75	33	5.0	10W
1N4284	S	1N3003	1N2970	Z						82	30	20	10W
1N4284A	S	1N3003A	1N2970	Z						82	30	10	10W
1N4284B	S	1N3003B	1N2970	Z						82	30	5.0	10W
1N4285	S	1N3004	1N2970	Z						91	28	20	10W
1N4285A	S	1N3004A	1N2970	Z						91	28	10	10W
1N4285B	S	1N3004B	1N2970	Z						91	28	5.0	10W
1N4286	S	1N3005	1N2970	Z						100	25	20	10W
1N4286A	S	1N3005A	1N2970	Z						100	25	10	10W
1N4286B	S	1N3005B	1N2970	Z						100	25	5.0	10W
1N4287	S	1N3007	1N2970	Z						110	23	20	10W
1N4287A	S	1N3007A	1N2970	Z						110	23	10	10W
1N4287B	S	1N3007B	1N2970	Z						110	23	5.0	10W
1N4288	S	1N3008	1N2970	Z						120	20	20	10W
1N4288A	S	1N3008A	1N2970	Z						120	20	10	10W
1N4288B	S	1N3008B	1N2970	Z						120	20	5.0	10W
1N4289	S	1N3009	1N2970	Z						130	19	20	10W
1N4289A	S	1N3009A	1N2970	Z						130	19	10	10W
1N4289B	S	1N3009B	1N2970	Z						130	19	5.0	10W
1N4290	S	1N3011	1N2970	Z						150	17	20	10W
1N4290A	S	1N3011A	1N2970	Z						150	17	10	10W
1N4290B	S	1N3011B	1N2970	Z						150	17	5.0	10W
1N4291	S	1N3012	1N2970	Z						160	16	20	10W
1N4291A	S	1N3012A	1N2970	Z						160	16	10	10W
1N4291B	S	1N3012B	1N2970	Z						160	16	5.0	10W
1N4292	S	1N3014	1N2970	Z						180	14	20	10W
1N4292A	S	1N3014A	1N2970	Z						180	14	10	10W
1N4292B	S	1N3014B	1N2970	Z						180	14	5.0	10W
1N4293	S	1N3015	1N2970	Z						200	12	20	10W
1N4293A	S	1N3015A	1N2970	Z						200	12	10	10W
1N4293B	S	1N3015B	1N2970	Z						200	12	5.0	10W
1N4294	S		Table 4	M									
1N4295	S			R						10	0.012	10	-55/150
1N4295A	S			R						10	0.012	10	-55/150
1N4296	S			R						10	0.012	20	-55/150
1N4296A	S			R						10	0.012	20	-55/150
1N4297	S			R						8.8	0.01	200	0/75
1N4297A	S			R						8.8	0.01	200	-55/100
1N4297B	S			R						8.8	0.01	200	-55/150
1N4298	S			R						8.8	0.005	200	0/75
1N4298A	S			R						8.8	0.005	200	-55/100
1N4298B	S			R						8.8	0.005	200	-55/150
1N4299	S			R						11.3	0.01	150	0/75
1N4299A	S			R						11.3	0.01	150	-55/100
1N4299B	S			R						11.3	0.01	150	-55/150
1N4300	S			R						11.3	0.01	150	0/75
1N4300A	S			R						11.3	0.005	150	-55/100
1N4300B	S			R						11.3	0.005	150	-55/150
1N4301	S			R						8.8	0.005	1000	0/50
1N4301A	S			R						8.8	0.01	1000	-55/50
1N4301B	S			R						8.8	0.01	1000	-55/50
1N4302	S			R						8.8	0.01	1000	0/50
1N4302A	S			R						8.8	0.005	1000	-55/100
1N4302B	S			R						8.8	0.005	1000	-55/150
1N4303	S			R						11.3	0.005	1000	0/75
1N4303A	S			R						11.3	0.01	750	-55/50
1N4303B	S			R						11.3	0.01	750	-55/50
1N4304	S			R						11.3	0.005	750	0/50
1N4304A	S			R						11.3	0.005	750	-55/50
1N4304B	S			R						11.3	0.005	750	-55/50
1N4305				S	75	0.575	0.25m	0.1*	2.0				
1N4306	S			S	50	1.0	50m	50n	2.0				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N4307	S			S	50	1.0	50m	50n	2.0				
1N4308	S			S	80	1.0	200m	0.1*	2.0				
1N4309	S			S	40	1.0	400m	0.1*	2.0				
1N4310	S			S	60	1.0	400m	0.1*	2.0				
1N4311	S			S	80	1.0	300m	0.1*	2.0				
1N4312	S			S	120	1.0	200m	0.1*	2.0				
1N4313	S			S	80	1.0	100m	0.1*	4.0				
1N4314	S			S	80	1.0	200m	0.1*	2.0				
1N4315	S			S	40	1.0	400m	0.1*	2.0				
1N4316	S			S	60	1.0	400m	0.1*	2.0				
1N4317	S			S	80	1.0	300m	0.1*	2.0				
1N4318	S			S	120	1.0	200m	0.1*	2.0				
1N4319	S			S	80	1.0	100m	0.1*	4.0				
1N4320	S			S	640			1.0*					
1N4321	S	5M50ZS10	1N4728	Z						50	15	10	3.0W
1N4322	S			S	50	1.0	0.2	0.1*	6.0				
1N4323	S	1N4736	1N4728	Z						6.8	37	20	1.0W
1N4323A	S	1N4736	1N4728	Z						6.8	37	10	1.0W
1N4323B	S	1N4736A	1N4728	Z						6.8	37	5.0	1.0W
1N4324	S	1N4737	1N4728	Z						7.5	34	20	1.0W
1N4324A	S	1N4737	1N4728	Z						7.5	34	10	1.0W
1N4324B	S	1N4737A	1N4728	Z						7.5	34	5.0	1.0W
1N4325	S	1N4738	1N4728	Z						8.2	31	20	1.0W
1N4325A	S	1N4738	1N4728	Z						8.2	31	10	1.0W
1N4325B	S	1N4738A	1N4728	Z						8.2	31	5.0	1.0W
1N4326	S	1N4739	1N4728	Z						9.1	28	20	1.0W
1N4326A	S	1N4739	1N4728	Z						9.1	28	10	1.0W
1N4326B	S	1N4739A	1N4728	Z						9.1	28	5.0	1.0W
1N4327	S	1N4740	1N4728	Z						10	25	20	1.0W
1N4327A	S	1N4740	1N4728	Z						10	25	10	1.0W
1N4327B	S	1N4740A	1N4728	Z						10	25	5.0	1.0W
1N4328	S	1N4741	1N4728	Z						11	23	20	1.0W
1N4328A	S	1N4741	1N4728	Z						11	23	10	1.0W
1N4328B	S	1N4741A	1N4728	Z						11	23	5.0	1.0W
1N4329	S	1N4742	1N4728	Z						12	21	20	1.0W
1N4329A	S	1N4742	1N4728	Z						12	21	10	1.0W
1N4329B	S	1N4742A	1N4728	Z						12	21	5.0	1.0W
1N4330	S	1N4743	1N4728	Z						13	19	20	1.0W
1N4330A	S	1N4743	1N4728	Z						13	19	10	1.0W
1N4330B	S	1N4743A	1N4728	Z						13	19	5.0	1.0W
1N4331	S	1N4744	1N4728	Z						15	17	20	1.0W
1N4331A	S	1N4744	1N4728	Z						15	17	10	1.0W
1N4331B	S	1N4744A	1N4728	Z						15	17	5.0	1.0W
1N4332	S	1N4745	1N4728	Z						16	16	20	1.0W
1N4332A	S	1N4745	1N4728	Z						16	16	10	1.0W
1N4332B	S	1N4745A	1N4728	Z						16	16	5.0	1.0W
1N4333	S	1N4746	1N4728	Z						18	14	20	1.0W
1N4333A	S	1N4746	1N4728	Z						18	14	10	1.0W
1N4333B	S	1N4746A	1N4728	Z						18	14	5.0	1.0W
1N4334	S	1N4747	1N4728	Z						20	13	20	1.0W
1N4334A	S	1N4747	1N4728	Z						20	13	10	1.0W
1N4334B	S	1N4747A	1N4728	Z						20	13	5.0	1.0W
1N4335	S	1N4748	1N4728	Z						22	12	20	1.0W
1N4335A	S	1N4748	1N4728	Z						22	12	10	1.0W
1N4335B	S	1N4748A	1N4728	Z						22	12	5.0	1.0W
1N4336	S	1N4749	1N4728	Z						24	11	20	1.0W
1N4336A	S	1N4749	1N4728	Z						24	11	10	1.0W
1N4336B	S	1N4749A	1N4728	Z						24	11	5.0	1.0W
1N4337	S	1N4750	1N4728	Z						27	9.5	20	1.0W
1N4337A	S	1N4750	1N4728	Z						27	9.5	10	1.0W
1N4337B	S	1N4750A	1N4728	Z						27	9.5	5.0	1.0W
1N4338	S	1N4751	1N4728	Z						30	8.5	20	1.0W
1N4338A	S	1N4751	1N4728	Z						30	8.5	10	1.0W
1N4338B	S	1N4751A	1N4728	Z						30	8.5	5.0	1.0W
1N4339	S	1N4752	1N4728	Z						33	7.5	20	1.0W
1N4339A	S	1N4752	1N4728	Z						33	7.5	10	1.0W
1N4339B	S	1N4752A	1N4728	Z						33	7.5	5.0	1.0W
1N4340	S	1N4753	1N4728	Z						36	7.0	20	1.0W
1N4340A	S	1N4753	1N4728	Z						36	7.0	10	1.0W
1N4340B	S	1N4753A	1N4728	Z						36	7.0	5.0	1.0W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N4341	S	1N4754	1N4728	Z						39	6.5	20	1.0W
1N4341A	S	1N4754	1N4728	Z						39	6.5	10	1.0W
1N4341B	S	1N4754A	1N4728	Z						39	6.5	5.0	1.0W
1N4342	S	1N4755	1N4728	Z						43	6.0	20	1.0W
1N4342A	S	1N4755	1N4728	Z						43	6.0	10	1.0W
1N4342B	S	1N4755A	1N4728	Z						43	6.0	5.0	1.0W
1N4343	S	1N4756	1N4728	Z						47	5.5	20	1.0W
1N4343A	S	1N4756	1N4728	Z						47	5.5	10	1.0W
1N4343B	S	1N4756A	1N4728	Z						47	5.5	5.0	1.0W
1N4344	S	1N4757	1N4728	Z						51	5.0	20	1.0W
1N4344A	S	1N4757	1N4728	Z						51	5.0	10	1.0W
1N4344B	S	1N4757A	1N4728	Z						51	5.0	5.0	1.0W
1N4345	S	1N4758	1N4728	Z						56	4.5	20	1.0W
1N4345A	S	1N4758	1N4728	Z						56	4.5	10	1.0W
1N4345B	S	1N4758A	1N4728	Z						56	4.5	5.0	1.0W
1N4346	S	1N4759	1N4728	Z						62	4.0	20	1.0W
1N4346A	S	1N4759	1N4728	Z						62	4.0	10	1.0W
1N4346B	S	1N4759A	1N4728	Z						62	4.0	5.0	1.0W
1N4347	S	1N4760	1N4728	Z						68	3.7	20	1.0W
1N4347A	S	1N4760	1N4728	Z						68	3.7	10	1.0W
1N4347B	S	1N4760A	1N4728	Z						68	3.7	5.0	1.0W
1N4348	S	1N4761	1N4728	Z						75	3.3	20	1.0W
1N4348A	S	1N4761	1N4728	Z						75	3.3	10	1.0W
1N4348B	S	1N4761A	1N4728	Z						75	3.3	5.0	1.0W
1N4349	S	1N4762	1N4728	Z						82	3.0	20	1.0W
1N4349A	S	1N4762	1N4728	Z						82	3.0	10	1.0W
1N4349B	S	1N4762A	1N4728	Z						82	3.0	5.0	1.0W
1N4350	S	1N4763	1N4728	Z						91	2.8	20	1.0W
1N4350A	S	1N4763	1N4728	Z						91	2.8	10	1.0W
1N4350B	S	1N4763A	1N4728	Z						91	2.8	5.0	1.0W
1N4351	S	1N4764	1N4728	Z						100	2.5	20	1.0W
1N4351A	S	1N4764	1N4728	Z						100	2.5	10	1.0W
1N4351B	S	1N4764A	1N4728	Z						100	2.5	5.0	1.0W
1N4352	S	1M110ZS10	1N4728	Z						110	2.3	20	1.0W
1N4352A	S	1M110ZS10	1N4728	Z						110	2.3	10	1.0W
1N4352B	S	1M110ZS5	1N4728	Z						110	2.3	5.0	1.0W
1N4353	S	1M120ZS10	1N4728	Z						120	2.0	20	1.0W
1N4353A	S	1N120ZS10	1N4728	Z						120	2.0	10	1.0W
1N4353B	S	1M120ZS5	1N4728	Z						120	2.0	5.0	1.0W
1N4354	S	1M130ZS10	1N4728	Z						130	1.9	20	1.0W
1N4354A	S	1M130ZS10	1N4728	Z						130	1.9	10	1.0W
1N4354B	S	1M130ZS5	1N4728	Z						130	1.9	5.0	1.0W
1N4355	S	1M150ZS10	1N4728	Z						150	1.7	20	1.0W
1N4355A	S	1M150ZS10	1N4728	Z						150	1.7	10	1.0W
1N4355B	S	1M150ZS5	1N4728	Z						150	1.7	5.0	1.0W
1N4356	S	1M160ZS10	1N4728	Z						160	1.6	20	1.0W
1N4356A	S	1M160ZS10	1N4728	Z						160	1.6	10	1.0W
1N4356B	S	1M160ZS5	1N4728	Z						160	1.6	5.0	1.0W
1N4357	S	1M180ZS10	1N4728	Z						180	1.4	20	1.0W
1N4357A	S	1M180ZS10	1N4728	Z						180	1.4	10	1.0W
1N4357B	S	1M180ZS5	1N4728	Z						180	1.4	5.0	1.0W
1N4358	S	1M200ZS10	1N4728	Z						200	1.2	20	1.0W
1N4358A	S	1M200ZS10	1N4728	Z						200	1.2	10	1.0W
1N4358B	S	1M200ZS5	1N4728	Z						200	1.2	5.0	1.0W
1N4359	S			S	200								
1N4360	S	1N4370A	1N746	Z						2.4	10	5.0	0.25W
1N4361	S	1N4007	1N4001	G	900	1.3	0.5	0.5	20				
1N4362	S			S	100	0.9	0.1	10n					
1N4363	S			S	120	1.0	0.2	0.1*	40				
1N4364	S	1N4002	1N4001	G	100	1.5	0.75	0.1	20				
1N4365	S	1N4003	1N4001	G	200	1.5	0.75	0.1	20				
1N4366	S	1N4004	1N4001	G	300	1.5	0.75	0.1	20				
1N4367	S	1N4004	1N4001	G	400	1.5	0.75	0.1	20				
1N4368	S	1N4005	1N4001	G	500	1.5	0.75	0.1	20				
1N4369	S	1N4005	1N4001	G	600	1.5	0.75	0.1	20				
★1N4370	S		1N746	Z						2.4	20	10	0.4W
★1N4370A	S		1N746	Z						2.4	20	5.0	0.4W
★1N4371	S		1N746	Z						2.7	20	10	0.4W
★1N4371A	S		1N746	Z						2.7	20	5.0	0.4W
★1N4372	S		1N746	Z						3.0	20	10	0.4W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N4372A	S		1N746	Z						3.0	20	5.0	0.4W
1N4373	S			S	80	1.0	10m	5.0*	4.0				
1N4374	S	MR991A	MR990A	G	1500	1.75	0.75	0.1	15				
1N4375	S			S	50	1.0	20m	10n	6.0				
1N4376	S			S	10	1.1	50m	0.1*	0.75				
1N4377	S			G	25k	30	0.75	0.1	50				
1N4378	S			D									
1N4379	S		Table 4	M									
1N4380	S			S	50	1.4	570m	50n	1.8				
1N4381	G			S	25	0.35	2.0m	0.1m	0.1				
1N4382	S			S	55	1.0	0.3	0.1*	6.5				
1N4383	S	1N4003	1N4001	G	200	1.3	1.0	0.275	50				
1N4384	S	1N4004	1N4001	G	400	1.3	1.0	0.25	50				
1N4385	S	1N4005	1N4001	G	600	1.3	1.0	0.225	50				
★1N4387			Table 3	V									
★1N4388			Table 3	V									
1N4389	S			S	5.0	1.0	2.0m	0.1m					
1N4390	S			S	20	1.0	5.0m	0.2*	0.5				
1N4391	S			S	20	1.0	2.0m	0.2*	0.5				
1N4392	S			S	15	1.0	2.0m	1.0*	0.5				
1N4393, A,B thru 1N4399, A,B	S			T									
1N4400	S	1N4736	1N4728	Z						6.8	37	20	1.0W
1N4401	S	1N4737	1N4728	Z						7.5	34	20	1.0W
1N4402	S	1N4738	1N4728	Z						8.2	31	20	1.0W
1N4403	S	1N4739	1N4728	Z						9.1	28	20	1.0W
1N4404	S	1N4740	1N4728	Z						10	25	20	1.0W
1N4405	S	1N4741	1N4728	Z						11	23	20	1.0W
1N4406	S	1N4742	1N4728	Z						12	21	20	1.0W
1N4407	S	1N4743	1N4728	Z						13	19	20	1.0W
1N4408	S	1N4744	1N4728	Z						15	17	20	1.0W
1N4409	S	1N4745	1N4728	Z						16	19	20	1.0W
1N4410	S	1N4746	1N4728	Z						18	14	20	1.0W
1N4411	S	1N4747	1N4728	Z						20	13	20	1.0W
1N4412	S	1N4748	1N4728	Z						22	12	20	1.0W
1N4413	S	1N4749	1N4728	Z						24	11	20	1.0W
1N4414	S	1N4750	1N4728	Z						27	9.5	20	1.0W
1N4415	S	1N4751	1N4728	Z						30	8.5	20	1.0W
1N4416	S	1N4752	1N4728	Z						33	7.5	20	1.0W
1N4417	S	1N4753	1N4728	Z						36	7.0	20	1.0W
1N4418	S	1N4754	1N4728	Z						39	6.5	20	1.0W
1N4419	S	1N4755	1N4728	Z						43	6.0	20	1.0W
1N4420	S	1N4756	1N4728	Z						47	5.5	20	1.0W
1N4421	S	1N4757	1N4728	Z						51	5.0	20	1.0W
1N4422	S	1N4758	1N4728	Z						56	4.5	20	1.0W
1N4423	S	1N4759	1N4728	Z						62	4.0	20	1.0W
1N4424	S	1N4760	1N4728	Z						68	3.7	20	1.0W
1N4425	S	1N4761	1N4728	Z						75	3.3	20	1.0W
1N4426	S	1N4762	1N4728	Z						82	3.0	20	1.0W
1N4427	S	1N4763	1N4728	Z						91	2.8	20	1.0W
1N4428	S	1N4764	1N4728	Z						100	2.5	20	1.0W
1N4429	S	1M110ZS10	1N4728	Z						110	2.3	20	1.0W
1N4430	S	1M120ZS10	1N4728	Z						120	2.0	20	1.0W
1N4431	S	1M130ZS10	1N4728	Z						130	1.9	20	1.0W
1N4432	S	1M150ZS10	1N4728	Z						150	1.7	20	1.0W
1N4433	S	1M160ZS10	1N4728	Z						160	1.6	20	1.0W
1N4434	S	1M180ZS10	1N4728	Z						180	1.4	20	1.0W
1N4435	S	1M200ZS10	1N4728	Z						200	1.2	20	1.0W
1N4436	S			G	200	1.2	10	1.0	100				
1N4437	S			G	400	1.2	10	1.0	100				
1N4438	S			G	600	1.0	10	1.0	100				
1N4439	S			G	800	1.2	10	1.0	100				
1N4440	S			G	1000	1.2	10	1.0	100				
1N4441	S			G	1500	4.0	0.025	0.001	3.0				
1N4442	S			S	30	1.0	0.1	1.0n	1.0				
1N4443	S			S	50	1.0	0.1	2.0n	0.6				
1N4444	S			S	50	1.0	0.1	50n	7.0				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} µs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N4445	S			S	100	1.0	0.1	50n	4.0				
1N4446	S			S	75	1.0	20m	25n	4.0				
1N4447	S			S	75	1.0	20m	25n	4.0				
1N4448	S			S	75	0.72	5.0m	25n	4.0				
1N4449	S			S	75	0.73	5.0m	25n	4.0				
1N4450	S			S	30	0.92	0.1	50n	4.0				
1N4451	S			S	30	0.875	0.1	50n	10				
1N4452	S			S	30	1.2	1.0	50n	50				
1N4453	S			S	20	0.92	0.1	50n					
1N4454	S			S	75	1.0	10m	0.1*	2.0				
1N4455	S			S	50	0.7	5.0m	0.1*					
1N4456	S			S	35	1.0	0.15	0.2*	1.5				
1N4457	S			S	50	1.0	0.2	0.2*	1.5				
1N4458	S			G	800	1.5	5.0	0.5	150				
1N4459	S			G	1000	1.5	5.0	0.5	150				
1N4460	S	1N4735A	1N4728	Z						6.2	40	5.0	1.5W
1N4461	S	1N4736A	1N4728	Z						6.8	37	5.0	1.5W
1N4462	S	1N4737A	1N4728	Z						7.5	34	5.0	1.5W
1N4463	S	1N4738A	1N4728	Z						8.2	31	5.0	1.5W
1N4464	S	1N4739A	1N4728	Z						9.1	28	5.0	1.5W
1N4465	S	1N4740A	1N4728	Z						10	25	5.0	1.5W
1N4466	S	1N4741A	1N4728	Z						11	23	5.0	1.5W
1N4467	S	1N4742A	1N4728	Z						12	21	5.0	1.5W
1N4468	S	1N4743A	1N4728	Z						13	19	5.0	1.5W
1N4469	S	1N4744A	1N4728	Z						15	17	5.0	1.5W
1N4470	S	1N4745A	1N4728	Z						16	16	5.0	1.5W
1N4471	S	1N4746A	1N4728	Z						18	14	5.0	1.5W
1N4472	S	1N4747A	1N4728	Z						20	13	5.0	1.5W
1N4473	S	1N4748A	1N4728	Z						22	12	5.0	1.5W
1N4474	S	1N4749A	1N4728	Z						24	11	5.0	1.5W
1N4475	S	1N4750A	1N4728	Z						27	9.5	5.0	1.5W
1N4476	S	1N4751A	1N4728	Z						30	8.5	5.0	1.5W
1N4477	S	1N4752A	1N4728	Z						33	7.5	5.0	1.5W
1N4478	S	1N4753A	1N4728	Z						36	7.0	5.0	1.5W
1N4479	S	1N4754A	1N4728	Z						39	6.5	5.0	1.5W
1N4480	S	1N4755A	1N4728	Z						43	6.0	5.0	1.5W
1N4481	S	1N4756A	1N4728	Z						47	5.5	5.0	1.5W
1N4482	S	1N4757A	1N4728	Z						51	5.0	5.0	1.5W
1N4483	S	1N4758A	1N4728	Z						56	4.5	5.0	1.5W
1N4484	S	1N4759A	1N4728	Z						62	4.0	5.0	1.5W
1N4485	S	1N4760A	1N4728	Z						68	3.7	5.0	1.5W
1N4486	S	1N4761A	1N4728	Z						75	3.3	5.0	1.5W
1N4487	S	1N4762A	1N4728	Z						82	3.0	5.0	1.5W
1N4488	S	1N4763A	1N4728	Z						91	2.8	5.0	1.5W
1N4489	S	1N4764A	1N4728	Z						100	2.5	5.0	1.5W
1N4490	S	1M110ZS5	1N4728	Z						110	2.3	5.0	1.5W
1N4491	S	1M120ZS5	1N4728	Z						120	2.0	5.0	1.5W
1N4492	S	1M130ZS5	1N4728	Z						130	1.9	5.0	1.5W
1N4493	S	1M150ZS5	1N4728	Z						150	1.7	5.0	1.5W
1N4494	S	1M160ZS5	1N4728	Z						160	1.6	5.0	1.5W
1N4495	S	1M180ZS5	1N4728	Z						180	1.4	5.0	1.5W
1N4496	S	1M200ZS5	1N4728	Z						200	1.2	5.0	1.5W
1N4497	S			G	1600	3.0	0.75	0.1	35				
1N4498	S			G	3000	5.0	0.75	0.1	35				
1N4499	S	1N4735A	1N4728	Z						6.2		5.0	1.0W
1N4500	S			S	80	1.0	0.3	0.1*	4.0				
1N4501	S			R						7.4	0.01		-55/100
1N4502	G			S	20	0.3	3.0m	10*					
1N4503	S	1N4752	1N4728	Z						33	20	10	3.0W
1N4504	S	1N5388A	1N5333	Z						200	4.0	10	3.0W
1N4505	S			G	6000	8.5	0.1	0.1	20				
1N4506	S	MR1122	MR1120	G	200	1.4	12	2.5	240				
1N4507	S	MR1124	MR1120	G	400	1.4	12	2.5	240				
1N4508	S	MR1126	MR1120	G	600	1.4	12	2.5	240				
1N4509	S	MR1128	MR1120	G	800	1.4	12	2.0	240				
1N4510	S	MR1130	MR1120	G	1000	1.4	12	1.75	240				
1N4511	S			G	1200	1.4	12	1.5	240				
1N4512	S			S	10	0.777	5.0m	10n					
1N4513	S			G	2000	4.5	0.25	0.1	20				
1N4514	S			G	800	1.0	1.1	0.1	50				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} µs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N4517	S			G	200	1.2	2.0	0.1	100				
1N4523	G			S	15	1.0	0.1	30*	8.0				
1N4524	G			S	10	0.65	10m	12*	3.0				
1N4525	S			G	200	1.4	35	3.5	500				
1N4526	S			G	400	1.4	35	3.5	500				
1N4527	S			G	600	1.4	35	3.5	500				
1N4528	S			G	800	1.4	35	3.0	500				
1N4529	S			G	1000	1.4	35	2.5	500				
1N4530	S			G	1200	1.4	35	2.0	500				
1N4531	S			S	75	1.0	10m	25n	4.0				
1N4532	S			S	75	1.0	10m	0.1*	2.0				
1N4533	S			S	40	0.88	20m	50n	2.0				
1N4534	S			S	50	0.88	20m	50n	2.0				
1N4535	S			Z						3.45	5.0	5.0	0.5W
1N4536	S			S	25	1.0	30m	0.1*	2.0				
1N4537	S			G	1500	1.85	3.0	0.3	15				
1N4538	S			G	2000	1.85	3.0	0.3	15				
1N4539	S			G	2500	1.85	3.0	0.3	15				
1N4540	S			G	3000	1.85	3.0	0.3	15				
1N4541	S			S	225	1.0	0.4	20n					
1N4542	S			S	400	1.0	0.4	20n					
1N4543	S			S	600	1.0	0.4	20n					
1N4544	S			S	800	1.0	0.4	20n					
1N4545	S			S	1000	1.0	400m	0.02*					
1N4546	S			G	25k	30	1.0	0.1	50				
1N4547	S			S	25	1.0	25m	10n					
1N4548	S			S	25	1.0	30m	0.1*	4.0				
★1N4549	S		1N2804	Z						3.9	3.2	20	50W
★1N4549A	S		1N2804	Z						3.9	3.2	10	50W
★1N4549B	S		1N2804	Z						3.9	3.2	5.0	50W
★1N4550	S		1N2804	Z						4.3	2900	20	50W
★1N4550A	S		1N2804	Z						4.3	2900	10	50W
★1N4550B	S		1N2804	Z						4.3	2900	5.0	50W
★1N4551	S		1N2804	Z						4.7	2600	20	50W
★1N4551A	S		1N2804	Z						4.7	2600	10	50W
★1N4551B	S		1N2804	Z						4.7	2600	5.0	50W
★1N4552	S		1N2804	Z						5.1	2400	20	50W
★1N4552A	S		1N2804	Z						5.1	2400	10	50W
★1N4552B	S		1N2804	Z						5.1	2400	5.0	50W
★1N4553	S		1N2804	Z						5.6	2200	20	50W
★1N4553A	S		1N2804	Z						5.6	2200	10	50W
★1N4553B	S		1N2804	Z						5.6	2200	5.0	50W
★1N4554	S		1N2804	Z						6.2	2000	20	50W
★1N4554A	S		1N2804	Z						6.2	2000	10	50W
★1N4554B	S		1N2804	Z						6.2	2000	5.0	50W
★1N4555	S		1N2804	Z						6.8	1800	20	50W
★1N4555A	S		1N2804	Z						6.8	1800	10	50W
★1N4555B	S		1N2804	Z						6.8	1800	5.0	50W
★1N4556	S		1N2804	Z						7.5	1600	20	50W
★1N4556A	S		1N2804	Z						7.5	1600	10	50W
★1N4556B	S		1N2804	Z						7.5	1600	5.0	50W
★1N4557	S		1N2804	Z						3.9	3200	20	50W
★1N4557A	S		1N2804	Z						3.9	3200	10	50W
★1N4557B	S		1N2804	Z						3.9	3200	5.0	50W
★1N4558	S		1N2804	Z						4.3	2900	20	50W
★1N4558A	S		1N2804	Z						4.3	2900	10	50W
★1N4558B	S		1N2804	Z						4.3	2900	5.0	50W
★1N4559	S		1N2804	Z						4.7	2800	20	50W
★1N4559A	S		1N2804	Z						4.7	2800	10	50W
★1N4559B	S		1N2804	Z						4.7	2800	5.0	50W
★1N4560	S		1N2804	Z						5.1	2400	20	50W
★1N4560A	S		1N2804	Z						5.1	2400	10	50W
★1N4560B	S		1N2804	Z						5.1	2400	5.0	50W
★1N4561	S		1N2804	Z						5.6	2200	20	50W
★1N4561A	S		1N2804	Z						5.6	2200	10	50W
★1N4561B	S		1N2804	Z						5.6	2200	5.0	50W
★1N4562	S		1N2804	Z						6.2	2000	20	50W
★1N4562A	S		1N2804	Z						6.2	2000	10	50W
★1N4562B	S		1N2804	Z						6.2	2000	5.0	50W
★1N4563	S		1N2804	Z						6.8	1800	20	50W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N4563A	S		1N2804	Z						**6.8**	**1800**	**10**	**50W**
★1N4563B	S		1N2804	Z						**6.8**	**1800**	**5.0**	**50W**
★1N4564	S		1N2804	Z						**7.5**	**1600**	**20**	**50W**
★1N4564A	S		1N2804	Z						**7.5**	**1600**	**10**	**50W**
★1N4564B	S		1N2804	Z						**7.5**	**1600**	**5.0**	**50W**
★1N4565	S		1N4565	R						6.4	0.01	0.5	0/75
★1N4565A	S		1N4565	R						6.4	0.01	0.5	-55/100
★1N4566	S		1N4565	R						6.4	0.005	0.5	0/75
★1N4566A	S		1N4565	R						6.4	0.005	0.5	-55/100
★1N4567	S		1N4565	R						6.4	0.002	0.5	0/75
★1N4567A	S		1N4565	R						6.4	0.002	0.5	-55/100
★1N4568	S		1N4565	R						6.4	0.001	0.5	0/76
★1N4568A	S		1N4565	R						6.4	0.001	0.5	-55/100
★1N4569	S		1N4565	R						6.4	0.0005	0.5	0/75
★1N4569A	S		1N4565	R						6.4	0.0005	0.5	-55/100
★1N4570	S		1N4565	R						6.4	0.01	1.0	0/75
★1N4570A	S		1N4565	R						6.4	0.01	1.0	-55/100
★1N4571	S		1N4565	R						6.4	0.005	1.0	0/75
★1N4571A	S		1N4565	R						6.4	0.005	1.0	-55/100
★1N4572	S		1N4565	R						6.4	0.002	1.0	0/75
★1N4572A	S		1N4565	R						6.4	0.002	1.0	-55/100
★1N4573	S		1N4565	R						6.4	0.001	1.0	0/75
★1N4573A	S		1N4565	R						6.4	0.001	1.0	-55/100
★1N4574	S		1N4565	R						6.4	0.0005	1.0	0/75
★1N4574A	S		1N4565	R						6.4	0.0005	1.0	-55/100
★1N4575	S		1N4565	R						6.4	0.01	2.0	0/75
★1N4575A	S		1N4565	R						6.4	0.01	2.0	-55/100
★1N4576	S		1N4565	R						6.4	0.005	2.0	0/75
★1N4576A	S		1N4565	R						6.4	0.005	2.0	-55/100
★1N4577	S		1N4565	R						6.4	0.002	2.0	0/75
★1N4577A	S		1N4565	R						6.4	0.002	2.0	-55/100
★1N4578	S		1N4565	R						6.4	0.001	2.0	0/75
★1N4578A	S		1N4565	R						6.4	0.001	2.0	-55/100
★1N4579	S		1N4565	R						6.4	0.0005	2.0	0/75
★1N4579A	S		1N4565	R						6.4	0.0005	2.0	-55/100
★1N4580	S		1N4565	R						6.4	0.01	4.0	0/75
★1N4580A	S		1N4565	R						6.4	0.01	4.0	-55/100
★1N4581	S		1N4565	R						6.4	0.005	4.0	0/75
★1N4581A	S		1N4565	R						6.4	0.005	4.0	-55/100
★1N4582	S		1N4565	R						6.4	0.002	4.0	0/75
★1N4582A	S		1N4565	R						6.4	0.002	4.0	-55/100
★1N4583	S		1N4565	R						6.4	0.0001	4.0	0/75
★1N4583A	S		1N4565	R						6.4	0.0001	4.0	-55/100
★1N4584	S		1N4565	R						6.4	0.0005	4.0	0/75
★1N4584A	S		1N4565	R						6.4	0.0005	4.0	-55/100
1N4585	S			G	800	1.3	1.0	0.2	50				
1N4586	S			G	1000	1.3	1.0	0.2	50				
1N4587	S	MR1221SB	MR1220	G	100	1.35	150	9.5	3000				
1N4588	S	MR1223SB	MR1220	G	200	1.35	150	9.5	3000				
1N4589	S	MR1225SB	MR1220	G	300	1.35	150	9.0	3000				
1N4590	S	MR1227SB	MR1220	G	400	1.35	150	9.0	3000				
1N4591	S	MR1228SB	MR1220	G	500	1.35	150	8.0	3000				
1N4592	S	MR1229SB	MR1220	G	600	1.35	150	6.5	3000				
1N4593	S			G	800	1.35	150	5.5	3000				
1N4594	S			G	1000	1.35	150	4.5	3000				
1N4595	S			G	1200	1.35	150	4.0	3000				
1N4596	S			G	1400	1.35	150	3.5	3000				
1N4597	S			G	5000	5.0	0.025		1.0				
1N4598			Table 3	V									
1N4599			Table 3	V									
1N4600	S		Table 4	M									
1N4601	S		Table 4	M									
1N4602	S		Table 4	M									
1N4603	S		Table 4	M									
1N4604	S		Table 4	M									
1N4605	S		Table 4	M									
1N4606	S			S	70	1.0	0.2	0.25*	6.0				
1N4607	S			S	70	0.95	250m	0.25*	10				
1N4608	S			S	70	0.96	350m	0.25*	10				
1N4609	S		Table 3	V									

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N4610	S			S	55	1.1	0.3	0.1*	2.0				
1N4611	S	1N4576A	1N4549	R						6.6	0.005	2.0	-50/175
1N4611A	S	1N4577A	1N4549	R						6.6	0.002	2.0	-50/175
1N4611B	S	1N4578A	1N4549	R						6.6	0.001	2.0	-50/175
1N4611C	S	1N4579A	1N4549	R						6.6	0.0005	2.0	-50/175
1N4612	S	1N4581A	1N4549	R						6.6	0.005	5.0	-50/175
1N4612A	S	1N4582A	1N4549	R						6.6	0.002	5.0	-50/175
1N4612B	S	1N4583A	1N4549	R						6.6	0.001	5.0	-50/175
1N4612C	S	1N4584A	1N4549	R						6.6	0.0005	5.0	-50/175
1N4613	S	1N4581A	1N4549	R						6.6	0.005	10	-50/175
1N4613A	S	1N4582A	1N4549	R						6.6	0.002	10	-50/175
1N4613B	S	1N4583A	1N4549	R						6.6	0.001	10	-50/175
1N4613C	S	1N4584A	1N4549	R						6.6	0.0005	10	-50/175
1N4614	S	MZ4614	1N4099	Z						1.8	0.25	5.0	0.25W
1N4615	S	MZ4615	1N4099	Z						2.0	0.25	5.0	0.25W
1N4616	S	MZ4616	1N4099	Z						2.2	0.25	5.0	0.25W
1N4617	S	MZ4617	1N4099	Z						2.4	0.25	5.0	0.25W
1N4618	S	MZ4618	1N4099	Z						2.7	0.25	5.0	0.25W
1N4619	S	MZ4619	1N4099	Z						3.0	0.25	5.0	0.25W
1N4620	S	MZ4620	1N4099	Z						3.3	0.25	5.0	0.25W
1N4621	S	MZ4621	1N4099	Z						3.6	0.25	5.0	0.25W
1N4622	S	MZ4622	1N4099	Z						3.9	0.25	5.0	0.25W
1N4623	S	MZ4623	1N4099	Z						4.3	0.25	5.0	0.25W
1N4624	S	MZ4624	1N4099	Z						4.7	0.25	5.0	0.25W
1N4625	S	MZ4625	1N4099	Z						5.1	0.25	5.0	0.25W
1N4626	S	MZ4626	1N4099	Z						5.6	0.25	5.0	0.25W
1N4627	S	MZ4627	1N4099	Z						6.2	0.25	5.0	0.25W
1N4628	S	1N4736A	1N4728	Z						6.8	19	5.0	0.6W
1N4629	S	1N4737A	1N4728	Z						7.5	17	5.0	0.6W
1N4630	S	1N4738A	1N4728	Z						8.2	15	5.0	0.6W
1N4631	S	1N4739A	1N4728	Z						9.1	14	5.0	0.6W
1N4632	S	1N4740A	1N4728	Z						10	13	5.0	0.6W
1N4633	S	1N4741A	1N4728	Z						11	12	5.0	0.6W
1N4634	S	1N4742A	1N4728	Z						12	11	5.0	0.6W
1N4635	S	1N4743A	1N4728	Z						13	9.5	5.0	0.6W
1N4636	S	1N4744A	1N4728	Z						15	8.5	5.0	0.6W
1N4637	S	1N4745A	1N4728	Z						16	7.8	5.0	0.6W
1N4638	S	1N4746A	1N4728	Z						18	7.0	5.0	0.6W
1N4639	S	1N4747A	1N4728	Z						20	6.2	5.0	0.6W
1N4640	S	1N4748A	1N4728	Z						22	6.0	5.0	0.6W
1N4641	S	1N4749A	1N4728	Z						24	5.2	5.0	0.6W
1N4642	S	1N4750A	1N4728	Z						27	4.6	5.0	0.6W
1N4643	S	1N4751A	1N4728	Z						30	4.2	5.0	0.6W
1N4644	S	1N4752A	1N4728	Z						33	3.8	5.0	0.6W
1N4645	S	1N4753A	1N4728	Z						36	3.4	5.0	0.6W
1N4646	S	1N4754A	1N4728	Z						39	3.2	5.0	0.6W
1N4647	S	1N4755A	1N4728	Z						43	3.0	5.0	0.6W
1N4648	S	1N4756A	1N4728	Z						47	2.7	5.0	0.6W
1N4649	S	1N4728A	1N4728	Z						3.3	10	5.0	1.0W
1N4650	S	1N4729A	1N4728	Z						3.6	10	5.0	1.0W
1N4651	S	1N4730A	1N4728	Z						3.9	64	5.0	1.0W
1N4652	S	1N4731A	1N4728	Z						4.3	58	5.0	1.0W
1N4653	S	1N4732A	1N4728	Z						4.7	53	5.0	1.0W
1N4654	S	1N4733A	1N4728	Z						5.1	49	5.0	1.0W
1N4655	S	1N4734A	1N4728	Z						5.6	45	5.0	1.0W
1N4656	S	1N4735A	1N4728	Z						6.2	41	5.0	1.0W
1N4657	S	1N4736A	1N4728	Z						6.8	37	5.0	1.0W
1N4658	S	1N4737A	1N4728	Z						7.5	34	5.0	1.0W
1N4659	S	1N4738A	1N4728	Z						8.2	31	5.0	1.0W
1N4660	S	1N4739A	1N4728	Z						9.1	28	5.0	1.0W
1N4661	S	1N4740A	1N4728	Z						10	25	5.0	1.0W
1N4662	S	1N4741A	1N4728	Z						11	23	5.0	1.0W
1N4663	S	1N4742A	1N4728	Z						12	21	5.0	1.0W
1N4664	S	1N4743A	1N4728	Z						13	19	5.0	1.0W
1N4665	S	1N4744A	1N4728	Z						15	17	5.0	1.0W
1N4666	S	1N4745A	1N4728	Z						16	16	5.0	1.0W
1N4667	S	1N4746A	1N4728	Z						18	14	5.0	1.0W
1N4668	S	1N4747A	1N4728	Z						20	13	5.0	1.0W
1N4669	S	1N4748A	1N4728	Z						22	12	5.0	1.0W
1N4670	S	1N4749A	1N4728	Z						24	11	5.0	1.0W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N4671	S	1N4750A	1N4728	Z						27	9.5	5.0	1.0W
1N4672	S	1N4751A	1N4728	Z						30	8.5	5.0	1.0W
1N4673	S	1N4752A	1N4728	Z						33	7.5	5.0	1.0W
1N4674	S	1N4753A	1N4728	Z						36	7.0	5.0	1.0W
1N4675	S	1N4754A	1N4728	Z						39	6.5	5.0	1.0W
1N4676	S	1N4755A	1N4728	Z						43	6.0	5.0	1.0W
1N4677	S	1N4756A	1N4728	Z						47	5.5	5.0	1.0W
1N4678	S			Z						1.8	0.05	5.0	250m
1N4679	S			Z						2.0	0.05	5.0	250m
1N4680	S			Z						2.2	0.05	5.0	250m
1N4681	S			Z						2.4	0.05	5.0	250m
1N4682	S			Z						2.7	0.05	5.0	250m
1N4683	S			Z						3.0	0.05	5.0	250m
1N4684	S			Z						3.3	0.05	5.0	250m
1N4685	S			Z						3.6	0.05	5.0	250m
1N4686	S			Z						3.9	0.05	5.0	250m
1N4687	S			Z						4.3	0.05	5.0	250m
1N4688	S			Z						4.7	0.05	5.0	250m
1N4689	S			Z						5.1	0.05	5.0	250m
1N4690	S			Z						5.6	0.05	5.0	250m
1N4691	S			Z						6.2	0.05	5.0	250m
1N4692	S			Z						6.8	0.05	5.0	250m
1N4693	S			Z						7.5	0.05	5.0	250m
1N4694	S			Z						8.2	0.05	5.0	250m
1N4695	S			Z						8.7	0.05	5.0	250m
1N4696	S			Z						9.1	0.05	5.0	250m
1N4697	S			Z						10	0.05	5.0	250m
1N4698	S			Z						11	0.05	5.0	250m
1N4699	S			Z						12	0.05	5.0	250m
1N4700	S			Z						13	0.05	5.0	250m
1N4701	S			Z						14	0.05	5.0	250m
1N4702	S			Z						15	0.05	5.0	250m
1N4703	S			Z						16	0.05	5.0	250m
1N4704	S			Z						17	0.05	5.0	250m
1N4705	S			Z						18	0.05	5.0	250m
1N4706	S			Z						19	0.05	5.0	250m
1N4707	S			Z						20	0.05	5.0	250m
1N4708	S			Z						22	0.05	5.0	250m
1N4709	S			Z						24	0.05	5.0	250m
1N4710	S			Z						25	0.05	5.0	250m
1N4711	S			Z						27	0.05	5.0	250m
1N4712	S			Z						28	0.05	5.0	250m
1N4713	S			Z						30	0.05	5.0	250m
1N4714	S			Z						33	0.05	5.0	250m
1N4715	S			Z						36	0.05	5.0	250m
1N4716	S			Z						39	0.05	5.0	250m
1N4717	S			Z						43	0.05	5.0	250m
1N4718	S			S	50	1.2	0.75	50*	180				
★1N4719	S		1N4719	G	50	1.0	3.0	1.5	300				
★1N4720	S		1N4719	G	100	1.0	3.0	1.5	300				
★1N4721	S		1N4719	G	200	1.0	3.0	1.5	300				
★1N4722	S		1N4719	G	400	1.0	3.0	1.5	300				
★1N4723	S		1N4719	G	600	1.0	3.0	1.5	300				
★1N4724	S		1N4719	G	800	1.0	3.0	1.5	300				
★1N4725	S		1N4719	G	1000	1.0	3.0	1.5	300				
1N4726	S			S	20	0.85	10m	0.1*					
1N4727	S			S	20	0.85	10m	0.1*					
★1N4728	S		1N4728	Z						3.3	76	10	1.0W
★1N4728A	S		1N4728	Z						3.3	76	5.0	1.0W
★1N4729	S		1N4728	Z						3.6	69	10	1.0W
★1N4729A	S		1N4728	Z						3.6	69	5.0	1.0W
★1N4730	S		1N4728	Z						3.9	64	10	1.0W
★1N4730A	S		1N4728	Z						3.9	64	5.0	1.0W
★1N4731	S		1N4728	Z						4.3	58	10	1.0W
★1N4731A	S		1N4728	Z						4.3	58	5.0	1.0W
★1N4732	S		1N4728	Z						4.7	53	10	1.0W
★1N4732A	S		1N4728	Z						4.7	53	5.0	1.0W
★1N4733	S		1N4728	Z						5.1	49	10	1.0W
★1N4733A	S		1N4728	Z						5.1	49	5.0	1.0W
★1N4734	S		1N4728	Z						5.6	45	10	1.0W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N4734A	S		1N4728	Z						5.6	45	5.0	1.0W
★1N4735	S		1N4728	Z						6.2	41	10	1.0W
★1N4735A	S		1N4728	Z						6.2	41	5.0	1.0W
★1N4736	S		1N4728	Z						6.8	37	10	1.0W
★1N4736A	S		1N4728	Z						6.8	37	5.0	1.0W
★1N4737	S		1N4728	Z						7.5	34	10	1.0W
★1N4737A	S		1N4728	Z						7.5	34	5.0	1.0W
★1N4738	S		1N4728	Z						8.2	31	10	1.0W
★1N4738A	S		1N4728	Z						8.2	31	5.0	1.0W
★1N4739	S		1N4728	Z						9.1	28	10	1.0W
★1N4739A	S		1N4728	Z						9.1	28	5.0	1.0W
★1N4740	S		1N4728	Z						10	25	10	1.0W
★1N4740A	S		1N4728	Z						10	25	5.0	1.0W
★1N4741	S		1N4728	Z						11	23	10	1.0W
★1N4741A	S		1N4728	Z						11	23	5.0	1.0W
★1N4742	S		1N4728	Z						12	21	10	1.0W
★1N4742A	S		1N4728	Z						12	21	5.0	1.0W
★1N4743	S		1N4728	Z						13	19	10	1.0W
★1N4743A	S		1N4728	Z						13	19	5.0	1.0W
★1N4744	S		1N4728	Z						15	17	10	1.0W
★1N4744A	S		1N4728	Z						15	17	5.0	1.0W
★1N4745	S		1N4728	Z						16	15.5	10	1.0W
★1N4745A	S		1N4728	Z						16	15.5	5.0	1.0W
★1N4746	S		1N4728	Z						18	14	10	1.0W
★1N4746A	S		1N4728	Z						18	14	5.0	1.0W
★1N4747	S		1N4728	Z						20	12.5	10	1.0W
★1N4747A	S		1N4728	Z						20	12.5	5.0	1.0W
★1N4748	S		1N4728	Z						22	11.5	10	1.0W
★1N4748A	S		1N4728	Z						22	11.5	5.0	1.0W
★1N4749	S		1N4728	Z						24	10.5	10	1.0W
★1N4749A	S		1N4728	Z						24	10.5	5.0	1.0W
★1N4750	S		1N4728	Z						27	9.5	10	1.0W
★1N4750A	S		1N4728	Z						27	9.5	5.0	1.0W
★1N4751	S		1N4728	Z						30	8.5	10	1.0W
★1N4751A	S		1N4728	Z						30	8.5	5.0	1.0W
★1N4752	S		1N4728	Z						33	7.5	10	1.0W
★1N4752A	S		1N4728	Z						33	7.5	5.0	1.0W
★1N4753	S		1N4728	Z						36	7.0	10	1.0W
★1N4753A	S		1N4728	Z						36	7.0	5.0	1.0W
★1N4754	S		1N4728	Z						39	6.5	10	1.0W
★1N4754A	S		1N4728	Z						39	6.5	5.0	1.0W
★1N4755	S		1N4728	Z						43	6.0	10	1.0W
★1N4755A	S		1N4728	Z						43	6.0	5.0	1.0W
★1N4756	S		1N4728	Z						47	5.5	10	1.0W
★1N4756A	S		1N4728	Z						47	5.5	5.0	1.0W
★1N4757	S		1N4728	Z						51	5.0	10	1.0W
★1N4757A	S		1N4728	Z						51	5.0	5.0	1.0W
★1N4758	S		1N4728	Z						56	4.5	10	1.0W
★1N4758A	S		1N4728	Z						56	4.5	5.0	1.0W
★1N4759	S		1N4728	Z						62	4.0	10	1.0W
★1N4759A	S		1N4728	Z						62	4.0	5.0	1.0W
★1N4760	S		1N4728	Z						68	3.7	10	1.0W
★1N4760A	S		1N4728	Z						68	3.7	5.0	1.0W
★1N4761	S		1N4728	Z						75	3.3	10	1.0W
★1N4761A	S		1N4728	Z						75	3.3	5.0	1.0W
★1N4762	S		1N4728	Z						82	3.0	10	1.0W
★1N4762A	S		1N4728	Z						82	3.0	5.0	1.0W
★1N4763	S		1N4728	Z						91	2.8	10	1.0W
★1N4763A	S		1N4728	Z						91	2.8	5.0	1.0W
★1N4764	S		1N4728	Z						100	2.5	10	1.0W
★1N4764A	S		1N4728	Z						100	2.4	5.0	1.0W
★1N4765	S		1N4565	R						9.1	0.01	0.5	0/75
★1N4765A	S		1N4565	R						9.1	0.01	0.5	-55/100
★1N4766	S		1N4565	R						9.1	0.005	0.5	0/75
★1N4766A	S		1N4565	R						9.1	0.005	0.5	-55/100
★1N4767	S		1N4565	R						9.1	0.002	0.5	0/75
★1N4767A	S		1N4565	R						9.1	0.002	0.5	-55/100
★1N4768	S		1N4565	R						9.1	0.001	0.5	0/75
★1N4768A	S		1N4565	R						9.1	0.001	0.5	-55/100
★1N4769	S		1N4565	R						9.1	0.0005	0.5	0/75

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N4769A	S		1N4565	R						9.1	0.0005	0.5	-55/100
★1N4770	S		1N4565	R						9.1	0.01	1.0	0/75
★1N4770A	S		1N4565	R						9.1	0.01	1.0	-55/100
★1N4771	S		1N4565	R						9.1	0.005	1.0	0/75
★1N4771A	S		1N4565	R						9.1	0.005	1.0	-55/100
★1N4772	S		1N4565	R						9.1	0.002	1.0	0/75
★1N4772A	S		1N4565	R						9.1	0.002	1.0	-55/100
★1N4773	S		1N4565	R						9.1	0.001	1.0	0/75
★1N4773A	S		1N4565	R						9.1	0.001	1.0	-55/100
★1N4774	S		1N4565	R						9.1	0.0005	1.0	0/75
★1N4774A	S		1N4565	R						9.1	0.0005	1.0	-55/100
★1N4775	S		1N4565	R						8.5	0.01	0.5	0/75
★1N4775A	S		1N4565	R						8.5	0.01	0.5	-55/100
★1N4776	S		1N4565	R						8.5	0.005	0.5	0/75
★1N4776A	S		1N4565	R						8.5	0.005	0.5	-55/100
★1N4777	S		1N4565	R						8.5	0.002	0.5	0/75
★1N4777A	S		1N4565	R						8.5	0.002	0.5	-55/100
★1N4778	S		1N4565	R						8.5	0.001	0.5	0/75
★1N4778A	S		1N4565	R						8.5	0.001	0.5	-55/100
★1N4779	S		1N4565	R						8.5	0.0005	0.5	0/75
★1N4779A	S		1N4565	R						8.5	0.0005	0.5	-55/100
★1N4780	S		1N4565	R						8.5	0.01	1.0	0/75
★1N4780A	S		1N4565	R						8.5	0.01	1.0	-55/100
★1N4781	S		1N4565	R						8.5	0.005	1.0	0/75
★1N4781A	S		1N4565	R						8.5	0.005	1.0	-55/100
★1N4782	S		1N4565	R						8.5	0.002	1.0	0/75
★1N4782A	S		1N4565	R						8.5	0.002	1.0	-55/100
★1N4783	S		1N4565	R						8.5	0.001	1.0	0/75
★1N4783A	S		1N4565	R						8.5	0.001	1.0	-55/100
★1N4784	S		1N4565	R						8.5	0.0005	1.0	0/75
★1N4784A	S		1N4565	R						8.5	0.0005	1.0	-55/100
1N4786 thru 1N4815			Table 3	V									
1N4816	S	1N4001	1N4001	G	50	1.3	1.5	0.25	50				
1N4817	S	1N4002	1N4001	G	100	1.3	1.5	0.25	50				
1N4818	S	1N4003	1N4001	G	200	1.3	1.5	0.25	50				
1N4819	S	1N4004	1N4001	G	300	1.3	1.5	0.25	50				
1N4820	S	1N4004	1N4001	G	400	1.3	1.5	0.25	50				
1N4821	S	1N4005	1N4001	G	500	1.3	1.5	0.25	50				
1N4822	S	1N4005	1N4001	G	600	1.3	1.5	0.25	50				
1N4823	S	1N4934	1N4933	G	100	1.25	1.0	1.0	35				
1N4824	S	1N4935	1N4933	G	200	1.25	1.0	1.0	35				
1N4825	S	1N4936	1N4933	G	400	1.25	1.0	1.0	35				
1N4826	S	1N4937	1N4933	G	600	1.25	1.0	1.0	35				
1N4827	G			S	30	1.0	40m	15*	0.2				
1N4828	S			S	20	1.1	0.1	0.1*					
1N4829	S			S	20	1.87	0.1	0.1*					
1N4830	S			S	20	2.69	0.1	0.1*					
1N4831	S	1N4739	1N4728	Z						9.1	28	20	1.2W
1N4831A	S	1N4739	1N4728	Z						9.1	28	10	1.2W
1N4831B	S	1N4739A	1N4728	Z						9.1	28	5.0	1.2W
1N4832	S	1N4740	1N4728	Z						10	25	20	1.2W
1N4832A	S	1N4740	1N4728	Z						10	25	10	1.2W
1N4832B	S	1N4740A	1N4728	Z						10	25	5.0	1.2W
1N4833	S	1N4741	1N4728	Z						11	23	20	1.2W
1N4833A	S	1N4741	1N4728	Z						11	23	10	1.2W
1N4833B	S	1N4741A	1N4728	Z						11	23	5.0	1.2W
1N4834	S	1N4742	1N4728	Z						12	21	20	1.2W
1N4834A	S	1N4742	1N4728	Z						12	21	10	1.2W
1N4834B	S	1N4742A	1N4728	Z						12	21	5.0	1.2W
1N4835	S	1N4743	1N4728	Z						13	19	20	1.2W
1N4835A	S	1N4743	1N4728	Z						13	19	10	1.2W
1N4835B	S	1N4743A	1N4728	Z						13	19	5.0	1.2W
1N4836	S	1N4744	1N4728	Z						15	17	20	1.2W
1N4836A	S	1N4744	1N4728	Z						15	17	10	1.2W
1N4836B	S	1N4744A	1N4728	Z						15	17	5.0	1.2W
1N4837	S	1N4745	1N4728	Z						16	16	20	1.2W
1N4837A	S	1N4745	1N4728	Z						16	16	10	1.2W
1N4837B	S	1N4745A	1N4728	Z						16	16	5.0	1.2W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N4838	S	1N4746	1N4728	Z						18	14	20	1.2W
1N4838A	S	1N4746	1N4728	Z						18	14	10	1.2W
1N4838B	S	1N4746A	1N4728	Z						18	14	5.0	1.2W
1N4839	S	1N4747	1N4728	Z						20	19	20	1.2W
1N4839A	S	1N4747	1N4728	Z						20	19	10	1.2W
1N4839B	S	1N4747A	1N4728	Z						20	19	5.0	1.2W
1N4840	S	1N4748	1N4728	Z						22	11	20	1.2W
1N4840A	S	1N4748	1N4728	Z						22	11	10	1.2W
1N4840B	S	1N4748A	1N4728	Z						22	11	5.0	1.2W
1N4841	S	1N4749	1N4728	Z						24	11	20	1.2W
1N4841A	S	1N4749	1N4728	Z						24	11	10	1.2W
1N4841B	S	1N4749A	1N4728	Z						24	11	5.0	1.2W
1N4842	S	1N4750	1N4728	Z						27	9.3	20	1.2W
1N4842A	S	1N4750	1N4728	Z						27	9.3	10	1.2W
1N4842B	S	1N4750A	1N4728	Z						27	9.3	5.0	1.2W
1N4843	S	1N4751	1N4728	Z						30	8.3	20	1.2W
1N4843A	S	1N4751	1N4728	Z						30	8.3	10	1.2W
1N4843B	S	1N4751A	1N4728	Z						30	8.3	5.0	1.2W
1N4844	S	1N4752	1N4728	Z						33	7.5	20	1.2W
1N4844A	S	1N4752	1N4728	Z						33	7.5	10	1.2W
1N4844B	S	1N4752A	1N4728	Z						33	7.5	5.0	1.2W
1N4845	S	1N4753	1N4728	Z						36	7.0	20	1.2W
1N4845A	S	1N4753	1N4728	Z						36	7.0	10	1.2W
1N4845B	S	1N4753A	1N4728	Z						36	7.0	5.0	1.2W
1N4846	S	1N4754	1N4728	Z						39	6.5	20	1.2W
1N4846A	S	1N4754	1N4728	Z						39	6.5	10	1.2W
1N4846B	S	1N4754A	1N4728	Z						39	6.5	5.0	1.2W
1N4847	S	1N4755	1N4728	Z						43	5.8	20	1.2W
1N4847A	S	1N4755	1N4728	Z						43	5.8	10	1.2W
1N4847B	S	1N4755A	1N4728	Z						43	5.8	5.0	1.2W
1N4848	S	1N4756	1N4728	Z						47	5.3	20	1.2W
1N4848A	S	1N4756	1N4728	Z						47	5.3	10	1.2W
1N4848B	S	1N4756A	1N4728	Z						47	5.3	5.0	1.2W
1N4849	S	1N4757	1N4728	Z						51	5.0	20	1.2W
1N4849A	S	1N4757	1N4728	Z						51	5.0	10	1.2W
1N4849B	S	1N4757A	1N4728	Z						51	5.0	5.0	1.2W
1N4850	S	1N4758	1N4728	Z						56	4.5	20	1.2W
1N4850A	S	1N4758	1N4728	Z						56	4.5	10	1.2W
1N4850B	S	1N4758A	1N4728	Z						56	4.5	5.0	1.2W
1N4851	S	1N4759	1N4728	Z						62	4.0	20	1.2W
1N4851A	S	1N4759	1N4728	Z						62	4.0	10	1.2W
1N4851B	S	1N4759A	1N4728	Z						62	4.0	5.0	1.2W
1N4852	S	1N4760	1N4728	Z						68	3.7	20	1.2W
1N4852A	S	1N4760	1N4728	Z						68	3.7	10	1.2W
1N4852B	S	1N4760A	1N4728	Z						68	3.7	5.0	1.2W
1N4853	S	1N4761	1N4728	Z						75	3.3	20	1.2W
1N4853A	S	1N4761	1N4728	Z						75	3.3	10	1.2W
1N4853B	S	1N4761A	1N4728	Z						75	3.3	5.0	1.2W
1N4854	S	1N4762	1N4728	Z						82	3.0	20	1.2W
1N4854A	S	1N4762	1N4728	Z						82	3.0	10	1.2W
1N4854B	S	1N4762A	1N4728	Z						82	3.0	5.0	1.2W
1N4855	S	1N4763	1N4728	Z						91	2.8	20	1.2W
1N4855A	S	1N4763	1N4728	Z						91	2.8	10	1.2W
1N4855B	S	1N4763A	1N4728	Z						91	2.8	5.0	1.2W
1N4856	S	1N5764	1N4728	Z						100	2.5	20	1.2W
1N4856A	S	1N5764	1N4728	Z						100	2.5	10	1.2W
1N4856B	S	1N5764A	1N4728	Z						100	2.5	5.0	1.2W
1N4857	S	1M110ZS10	1N4728	Z						110	2.3	20	1.2W
1N4857A	S	1M110ZS10	1N4728	Z						110	2.3	10	1.2W
1N4857B	S	1M110ZS5	1N4728	Z						110	2.3	5.0	1.2W
1N4858	S	1M120ZS10	1N4728	Z						120	1.2	20	1.2W
1N4858A	S	1M120ZS10	1N4728	Z						120	1.2	10	1.2W
1N4858B	S	1M120ZS5	1N4728	Z						120	1.2	5.0	1.2W
1N4859	S	1M130ZS10	1N4728	Z						130	1.9	20	1.2W
1N4859A	S	1M130ZS10	1N4728	Z						130	1.9	10	1.2W
1N4859B	S	1M130ZS5	1N4728	Z						130	1.9	5.0	1.2W
1N4860	S	1M150ZS10	1N4728	Z						150	1.7	20	1.2W
1N4860A	S	1M150ZS10	1N4728	Z						150	1.7	10	1.2W
1N4860B	S	1M150ZS5	1N4728	Z						150	1.7	5.0	1.2W
1N4861	S			S	50	1.2	0.1	2.0n	1.0				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} µs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N4862	S			S	50	1.1	0.1	5.0n	1.0				
1N4863	S			S	50	1.2	0.1	50n	7.0				
1N4864	S			S	80	1.1	0.1	0.1*	9.0				
1N4865	S			G	1500	2.4	1.25	0.6	150				
1N4866	S			G	2500	3.6	1.25	0.6	150				
1N4876	S			G	3000	4.8	1.25	0.6	150				
1N4868	S			G	5000	8.4	1.25	0.6	150				
1N4869	S			G	7500	12	1.25	0.6	150				
1N4870	S			G	10k	16	1.25	0.6	150				
1N4871	S			G	12k	18	1.25	0.6	150				
1N4872	S			G	15k	23	1.25	0.6	150				
1N4873	S			G	20k	30	1.25	0.6	150				
1N4874	S			G	25k	38	1.25	0.6	150				
1N4875	S			G	30k	46	1.25	0.6	150				
1N4876	S			G	40k	60	1.25	0.6	150				
1N4877	S			G	50k	76	1.25	0.6	150				
1N4878	S			G	100	1.3	100	5.0	1500				
1N4879	S	MR1221SB	MR1220	G	100	1.3	160	10	2200				
1N4880	S			G	100	1.2	250	10	4000				
1N4881	S	1N4747	1N4728	Z						40	20	10	3.0W
1N4882	S	1N4753	1N4728	Z						20	36	10	3.0W
1N4883	S	1N4742A	1N4728	Z						65	12	5.0	3.0W
1N4884	S	1N4747A	1N4728	Z						40	20	5.0	3.0W
1N4885			Table 3	V									
1N4886			Table 3	V									
1N4887	S			G	75k	115	1.25	0.6	150				
1N4888	S			S	12	1.0	20m	50n					
1N4889	S	1N3000B	1N2970	Z						62	20	5.0	5.0W
1N4890	S	MZ640	MZ600	R						6.35	0.001	7.5	25/100
1N4890A	S	MZ640	MZ600	R						6.35	0.001	7.5	-55/100
1N4891	S	MZ640	MZ600	R						6.35	0.0005	7.5	25/100
1N4891A	S	MZ640	MZ600	R						6.35	0.0005	7.5	-55/100
1N4892	S	MZ620	MZ600	R						6.35	0.001	7.5	25/100
1N4892A	S	MZ620	MZ600	R						6.35	0.001	7.5	-55/100
1N4893	S	MZ620	MZ600	R						6.35	0.0005	7.5	25/100
1N4893A	S	MZ620	MZ600	R						6.35	0.0005	7.5	-55/100
1N4894	S	MZ610	MZ600	R						6.35	0.001	7.5	25/100
1N4894A	S	MZ610	MZ600	R						6.35	0.001	7.5	-55/100
1N4895	S	MZ610	MZ600	R						6.35	0.0005	7.5	25/100
1N4895A	S	MZ610	MZ600	R						6.35	0.0005	7.5	-55/100
★1N4896	S		1N4765	R						12.8	0.01	0.5	25/100
★1N4896A	S		1N4765	R						12.8	0.01	0.5	-55/100
★1N4897	S		1N4765	R						12.8	0.005	0.5	25/100
★1N4897A	S		1N4765	R						12.8	0.005	0.5	-55/100
★1N4898	S		1N4765	R						12.8	0.002	0.5	25/100
★1N4898A	S		1N4765	R						12.8	0.002	0.5	-55/100
★1N4899	S		1N4765	R						12.8	0.001	0.5	25/100
★1N4899A	S		1N4765	R						12.8	0.001	0.5	-55/100
★1N4900	S		1N4765	R						12.8	0.01	1.0	25/100
★1N4900A	S		1N4765	R						12.8	0.01	1.0	-55/100
★1N4901	S		1N4765	R						12.8	0.005	1.0	25/100
★1N4901A	S		1N4765	R						12.8	0.005	1.0	-55/100
★1N4902	S		1N4765	R						12.8	0.002	1.0	25/100
★1N4902A	S		1N4765	R						12.8	0.002	1.0	-55/100
★1N4903	S		1N4765	R						12.8	0.001	1.0	25/100
★1N4903A	S		1N4765	R						12.8	0.001	1.0	-55/100
★1N4904	S		1N4765	R						12.8	0.01	2.0	25/100
★1N4904A	S		1N4765	R						12.8	0.01	2.0	-55/100
★1N4905	S		1N4765	R						12.8	0.005	2.0	25/100
★1N4905A	S		1N4765	R						12.8	0.005	2.0	-55/100
★1N4906	S		1N4765	R						12.8	0.002	2.0	25/100
★1N4906A	S		1N4765	R						12.8	0.002	2.0	-55/100
★1N4907	S		1N4765	R						12.8	0.001	2.0	25/100
★1N4907A	S		1N4765	R						12.8	0.001	2.0	-55/100
★1N4908	S		1N4765	R						12.8	0.01	4.0	25/100
★1N4908A	S		1N4765	R						12.8	0.01	4.0	-55/100
★1N4909	S		1N4765	R						12.8	0.005	4.0	25/100
★1N4909A	S		1N4765	R						12.8	0.005	4.0	-55/100
★1N4910	S		1N4765	R						12.8	0.002	4.0	25/100
★1N4910A	S		1N4765	R						12.8	0.002	4.0	-55/100

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N4911	S		1N4765	R						12.8	0.001	4.0	25/100
★1N4911A	S		1N4765	R						12.8	0.001	4.0	-55/100
★1N4912	S		1N4765	R						12.8	0.01	7.5	25/100
★1N4912A	S		1N4765	R						12.8	0.01	7.5	-55/100
★1N4913	S		1N4765	R						12.8	0.005	7.5	25/100
★1N4913A	S		1N4765	R						12.8	0.005	7.5	-55/100
★1N4914	S		1N4765	R						12.8	0.002	7.5	25/100
★1N4914A	S		1N4765	R						12.8	0.002	7.5	-55/100
★1N4915	S		1N4765	R						12.8	0.001	7.5	25/100
★1N4915A	S		1N4765	R						12.8	0.001	7.5	-55/100
★1N4916	S		1N4765	R						19.2	0.01	0.5	25/100
★1N4916A	S		1N4765	R						19.2	0.01	0.5	-55/100
★1N4917	S		1N4765	R						19.2	0.005	0.5	25/100
★1N4917A	S		1N4765	R						19.2	0.005	0.5	-55/100
★1N4918	S		1N4765	R						19.2	0.002	0.5	25/100
★1N4918A	S		1N4765	R						19.2	0.002	0.5	-55/100
★1N4919	S		1N4765	R						19.2	0.01	1.0	25/100
★1N4919A	S		1N4765	R						19.2	0.01	1.0	-55/100
★1N4920	S		1N4765	R						19.2	0.005	1.0	25/100
★1N4920A	S		1N4765	R						19.2	0.005	1.0	-55/100
★1N4921	S		1N4765	R						19.2	0.002	1.0	25/100
★1N4921A	S		1N4765	R						19.2	0.002	1.0	-55/100
★1N4922	S		1N4765	R						19.2	0.01	2.0	25/100
★1N4922A	S		1N4765	R						19.2	0.01	2.0	-55/100
★1N4923	S		1N4765	R						19.2	0.005	2.0	25/100
★1N4923A	S		1N4765	R						19.2	0.005	2.0	-55/100
★1N4924	S		1N4765	R						19.2	0.002	2.0	25/100
★1N4924A	S		1N4765	R						19.2	0.002	2.0	-55/100
★1N4925	S		1N4765	R						19.2	0.01	4.0	25/100
★1N4925A	S		1N4765	R						19.2	0.01	4.0	-55/100
★1N4926	S		1N4765	R						19.2	0.005	4.0	25/100
★1N4926A	S		1N4765	R						19.2	0.005	4.0	-55/100
★1N4927	S		1N4765	R						19.2	0.002	4.0	25/100
★1N4927A	S		1N4765	R						19.2	0.002	4.0	-55/100
★1N4928	S		1N4765	R						19.2	0.001	4.0	25/100
★1N4928A	S		1N4765	R						19.2	0.001	4.0	-55/100
★1N4929	S		1N4765	R						19.2	0.01	7.5	25/100
★1N4929A	S		1N4765	R						19.2	0.01	7.5	-55/100
★1N4930	S		1N4765	R						19.2	0.005	7.5	25/100
★1N4930A	S		1N4765	R						19.2	0.005	7.5	-55/100
★1N4931	S		1N4765	R						19.2	0.002	7.5	25/100
★1N4931A	S		1N4765	R						19.2	0.002	7.5	-55/100
★1N4932	S		1N4765	R						19.2	0.001	7.5	25/100
★1N4932A	S		1N4765	R						19.2	0.001	7.5	-55/100
★1N4933	S		1N4933	F	**50**	**1.2**	**1.0**	**0.3**	**30**				
★1N4934	S		1N4933	F	**100**	**1.2**	**1.0**	**0.3**	**30**				
★1N4935	S		1N4933	F	**200**	**1.2**	**1.0**	**0.3**	**30**				
★1N4936	S		1N4933	F	**400**	**1.2**	**1.0**	**0.3**	**30**				
★1N4937	S		1N4933	F	**600**	**1.2**	**1.0**	**0.3**	**30**				
1N4938	S			S	200	1.0	0.1	0.1*	50				
1N4939	G		Table 4	M									
1N4940	G		Table 4	M									
1N4941			Table 3	V									
1N4942	S			S	200	1.5	3.0	0.5m	150n				
1N4943	S			S	300	1.5	3.0	0.5m	150n				
1N4944	S			S	400	1.5	3.0	0.5m	150n				
1N4945	S			S	500	1.5	3.0	0.5m	150n				
1N4946	S			S	600	1.5	3.0	0.5m	250n				
1N4947	S			S	800	1.5	3.0	0.5m	300n				
1N4948	S			S	1000	1.5	3.0	0.5m	500n				
1N4950	S			S	25	0.53	1.0m	0.1m					
1N4951	S			S	20	0.85	1.0m	0.1*					
1N4952	S			S	50	0.85	1.0m	0.1*					
1N4954	S	1N5342B	1N5333	Z						**6.8**	**175**	**5.0**	**3.0W**
1N4955	S	1N5343B	1N5333	Z						**7.5**	**175**	**5.0**	**3.0W**
1N4956	S	1N5344B	1N5333	Z						**8.2**	**150**	**5.0**	**3.0W**
1N4957	S	1N5346B	1N5333	Z						**9.1**	**150**	**5.0**	**3.0W**
1N4958	S	1N5347B	1N5333	Z						**10**	**125**	**5.0**	**3.0W**
1N4959	S	1N5348B	1N5333	Z						**11**	**120**	**5.0**	**3.0W**
1N4960	S	1N5349B	1N5333	Z						**12**	**100**	**5.0**	**3.0W**

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N4961	S	1N5350B	1N5333	Z						13	100	5.0	3.0W
1N4962	S	1N5352B	1N5333	Z						15	75	5.0	3.0W
1N4963	S	1N5353B	1N5333	Z						16	5.0	5.0	3.0W
1N4964	S	1N5355B	1N5333	Z						18	65	5.0	3.0W
1N4965	S	1N5357B	1N5333	Z						20	65	5.0	3.0W
1N4966	S	1N5358B	1N5333	Z						22	50	5.0	3.0W
1N4967	S	1N5359B	1N5333	Z						24	50	5.0	3.0W
1N4968	S	1N5361B	1N5333	Z						27	50	5.0	3.0W
1N4969	S	1N5363B	1N5333	Z						30	40	5.0	3.0W
1N4970	S	1N5364B	1N5333	Z						33	40	5.0	3.0W
1N4971	S	1N5365B	1N5333	Z						36	30	5.0	3.0W
1N4972	S	1N5366B	1N5333	Z						39	30	5.0	3.0W
1N4973	S	1N5367B	1N5333	Z						43	30	5.0	3.0W
1N4974	S	1N5368B	1N5333	Z						47	25	5.0	3.0W
1N4975	S	1N5369B	1N5333	Z						51	25	5.0	3.0W
1N4976	S	1N5370B	1N5333	Z						56	20	5.0	3.0W
1N4977	S	1N5372B	1N5333	Z						62	20	5.0	3.0W
1N4978	S	1N5373B	1N5333	Z						68	20	5.0	3.0W
1N4979	S	1N5374B	1N5333	Z						75	20	5.0	3.0W
1N4980	S	1N5375B	1N5333	Z						82	15	5.0	3.0W
1N4981	S	1N5377B	1N5333	Z						91	15	5.0	3.0W
1N4982	S	1N5378B	1N5333	Z						100	12	5.0	3.0W
1N4983	S	1N5379B	1N5333	Z						110	12	5.0	3.0W
1N4984	S	1N5380B	1N5333	Z						120	10	5.0	3.0W
1N4985	S	1N5381B	1N5333	Z						130	19	5.0	3.0W
1N4986	S	1N5383B	1N5333	Z						150	8.0	5.0	3.0W
1N4987	S	1N5384B	1N5333	Z						160	8.0	5.0	3.0W
1N4988	S	1N5386B	1N5333	Z						180	5.0	5.0	3.0W
1N4989	S	1N5388B	1N5333	Z						200	5.0	5.0	3.0W
1N4990	S			Z						220	5.0	5.0	3.0W
1N4991	S			Z						240	5.0	5.0	3.0W
1N4992	S			Z						270	5.0	5.0	3.0W
1N4993	S			Z						300	4.0	5.0	3.0W
1N4994	S			Z						330	4.0	5.0	3.0W
1N4995	S			Z						360	3.0	5.0	3.0W
1N4996	S			Z						390	3.0	5.0	3.0W
★1N4997	S		1N4719	G	50	1.0	3.0	2.0	300				
★1N4998	S		1N4719	G	100	1.0	3.0	2.0	300				
★1N4999	S		1N4719	G	200	1.0	3.0	2.0	300				
★1N5000	S		1N4719	G	400	1.0	3.0	2.0	300				
★1N5001	S		1N4719	G	600	1.0	3.0	1.0	300				
★1N5002	S		1N4719	G	800	1.0	3.0	1.0	300				
★1N5003	S		1N4719	G	1000	1.0	3.0	1.0	300				
1N5004	S			G	100	1.3	1.0	1.0	35				
1N5005	S			G	200	1.3	1.0	1.0	35				
1N5006	S			G	400	1.3	1.0	1.0	35				
1N5007	S			G	600	1.3	1.0	1.0	35				
1N5008	S	1N4728	1N4728	Z						3.3	189	10	2.5W
1N5008A	S	1N4728A	1N4728	Z						3.3	189	5.0	2.5W
1N5009	S	1N4729	1N4728	Z						3.6	173	10	2.5W
1N5009A	S	1N4729A	1N4728	Z						3.6	173	5.0	2.5W
1N5010	S	1N4730	1N4728	Z						3.9	160	10	2.5W
1N5010A	S	1N4730A	1N4728	Z						3.9	160	5.0	2.5W
1N5011	S	1N4731	1N4728	Z						4.3	145	10	2.5W
1N5011A	S	1N4731A	1N4728	Z						4.3	145	5.0	2.5W
1N5012	S	1N4732	1N4728	Z						4.7	133	10	2.5W
1N5012A	S	1N4732A	1N4728	Z						4.7	133	5.0	2.5W
1N5013	S	1N4733	1N4728	Z						5.1	122	10	2.5W
1N5013A	S	1N4733A	1N4728	Z						5.1	122	5.0	2.5W
1N5014	S	1N4734	1N4728	Z						5.6	111	10	2.5W
1N5014A	S	1N4734A	1N4728	Z						5.6	111	5.0	2.5W
1N5015	S	1N4735	1N4728	Z						6.2	104	10	2.5W
1N5015A	S	1N4735A	1N4728	Z						6.2	104	5.0	2.5W
1N5016	S	1N4736	1N4728	Z						6.8	92	10	2.5W
1N5016A	S	1N4736A	1N4728	Z						6.8	92	5.0	2.5W
1N5017	S	1N4737	1N4728	Z						7.5	83	10	2.5W
1N5017A	S	1N4737A	1N4728	Z						7.5	83	5.0	2.5W
1N5018	S	1N4738	1N4728	Z						8.2	76	10	2.5W
1N5018A	S	1N4738A	1N4728	Z						8.2	76	5.0	2.5W
1N5019	S	1N4739	1N4728	Z						9.1	69	10	2.5W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N5019A	S	1N4739A	1N4728	Z						9.1	69	5.0	2.5W
1N5020	S	1N4740	1N4728	Z						10	62	10	2.5W
1N5020A	S	1N4740A	1N4728	Z						10	62	5.0	2.5W
1N5021	S	1N4741	1N4728	Z						11	57	10	2.5W
1N5021A	S	1N4741A	1N4728	Z						11	57	5.0	2.5W
1N5022	S	1N4742	1N4728	Z						12	52	10	2.5W
1N5022A	S	1N4742A	1N4728	Z						12	52	5.0	2.5W
1N5023	S	1N4743	1N4728	Z						13	48	10	2.5W
1N5023A	S	1N4743A	1N4728	Z						13	48	5.0	2.5W
1N5024	S	1M14ZS10		Z						14	45	10	2.5W
1N5024A	S	1M14ZS5		Z						14	45	5.0	2.5W
1N5025	S	1N4744	1N4728	Z						15	42	10	2.5W
1N5025A	S	1N4744A	1N4728	Z						15	42	5.0	2.5W
1N5026	S	1N4745	1N4728	Z						16	39	10	2.5W
1N5026A	S	1N4745A	1N4728	Z						16	39	5.0	2.5W
1N5027	S	1M17ZS10		Z						17	37	10	2.5W
1N5027A	S	1M17ZS5		Z						17	37	5.0	2.5W
1N5028	S	1N4746	1N4728	Z						18	35	10	2.5W
1N5028A	S	1N4746A	1N4728	Z						18	35	5.0	2.5W
1N5029	S	1M19ZS10		Z						19	33	10	2.5W
1N5029A	S	1M19ZS5		Z						19	33	5.0	2.5W
1N5030	S	1N4747	1N4728	Z						20	31	10	2.5W
1N5030A	S	1N4747A	1N4728	Z						20	31	5.0	2.5W
1N5031	S	1N4748	1N4728	Z						22	28	10	2.5W
1N5031A	S	1N4748A	1N4728	Z						22	28	5.0	2.5W
1N5032	S	1N4749	1N4728	Z						24	26	10	2.5W
1N5032A	S	1N4749A	1N4728	Z						24	26	5.0	2.5W
1N5033	S	1M25ZS10		Z						25	25	10	2.5W
1N5033A	S	1M25ZS5		Z						25	25	5.0	2.5W
1N5034	S	1N4750	1N4728	Z						27	23	10	2.5W
1N5034A	S	1N4750A	1N4728	Z						27	23	5.0	2.5W
1N5035	S	1N4751	1N4728	Z						30	21	10	2.5W
1N5035A	S	1N4751A	1N4728	Z						30	21	5.0	2.5W
1N5036	S	1N4752	1N4728	Z						33	19	10	2.5W
1N5036A	S	1N4752A	1N4728	Z						33	19	5.0	2.5W
1N5037	S	1N4753	1N4728	Z						36	17	10	2.5W
1N5037A	S	1N4753A	1N4728	Z						36	17	5.0	2.5W
1N5038	S	1N4754	1N4728	Z						39	16	10	2.5W
1N5038A	S	1N4754A	1N4728	Z						39	16	5.0	2.5W
1N5039	S	1N4755	1N4728	Z						43	15	10	2.5W
1N5039A	S	1N4755A	1N4728	Z						43	15	5.0	2.5W
1N5040	S	1M45ZS10		Z						45	14	10	2.5W
1N5040A	S	1M45ZS5		Z						45	14	5.0	2.5W
1N5041	S	1N4756	1N4728	Z						47	13	10	2.5W
1N5041A	S	1N4756A	1N4728	Z						47	13	5.0	2.5W
1N5042	S	1M50ZS10		Z						50	12	10	2.5W
1N5042A	S	1M50ZS5		Z						50	12	5.0	2.5W
1N5043	S	1N4757	1N4728	Z						51	12	10	2.5W
1N5043A	S	1N4757A	1N4728	Z						51	12	5.0	2.5W
1N5044	S	1M52ZS10	1N4728	Z						52	12	10	2.5W
1N5044A	S	1M52ZS5	1N4728	Z						52	12	5.0	2.5W
1N5045	S	1N4758	1N4728	Z						56	11	10	2.5W
1N5045A	S	1N4758A	1N4728	Z						56	11	5.0	2.5W
1N5046	S	1N4759	1N4728	Z						62	10	10	2.5W
1N5046A	S	1N4759A	1N4728	Z						62	10	5.0	2.5W
1N5047	S	1N4760	1N4728	Z						68	9.2	10	2.5W
1N5047A	S	1N4760A	1N4728	Z						68	9.2	5.0	2.5W
1N5048	S	1N4761	1N4728	Z						75	8.3	10	2.5W
1N5048A	S	1N4761A	1N4728	Z						75	8.3	5.0	2.5W
1N5049	S	1N4762	1N4728	Z						82	7.6	10	2.5W
1N5049A	S	1N4762A	1N4728	Z						82	7.6	5.0	2.5W
1N5050	S	1N4763	1N4728	Z						91	6.9	10	2.5W
1N5050A	S	1N4763A	1N4728	Z						91	6.9	5.0	2.5W
1N5051	S	1N4764	1N4728	Z						100	6.2	10	2.5W
1N5051A	S	1N4764A	1N4728	Z						100	6.2	5.0	2.5W
1N5052	S	1N4006	1N4001	G	700	1.3	1.5	0.5	50				
1N5053	S	1N4006	1N4001	G	800	1.3	1.5	0.5	50				
1N5054	S	1N4007	1N4001	G	1000	1.3	1.5	0.5	50				
1N5055	S	1N4002	1N4001	G	100	1.4	1.0	0.25	30				
1N5056	S	1N4003	1N4001	G	200	1.4	1.0	0.25	30				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N5057	S	1N4004	1N4001	G	300	1.4	0.8	0.25	30				
1N5058	S	1N4004	1N4001	G	400	1.4	0.8	0.25	30				
1N5059	S	1N4003	1N4001	G	200	1.0	1.5	0.3	100				
1N5060	S	1N4004	1N4001	G	400	1.0	1.5	0.3	100				
1N5061	S	1N4005	1N4001	G	600	1.0	1.5	0.2	100				
1N5062	S	1N4006	1N4001	G	800	1.0	1.25	0.2	100				
1N5063	S	1N4736A	1N4728	Z						6.8	75	5.0	3.0W
1N5064	S	1N4737A	1N4728	Z						7.5	75	5.0	3.0W
1N5065	S	1N4738A	1N4728	Z						8.2	75	5.0	3.0W
1N5066	S	1N4739A	1N4728	Z						9.1	75	5.0	3.0W
1N5067	S	1N4740A	1N4728	Z						10	75	5.0	3.0W
1N5068	S	1N4741A	1N4728	Z						11	70	5.0	3.0W
1N5069	S	1N4743A	1N4728	Z						13	50	5.0	3.0W
1N5070	S	1M14ZS5		Z						14	50	5.0	3.0W
★1N5071	S	1N4744A	1N4728	Z						15	50	5.0	3.0W
1N5072	S	1N4745A	1N4728	Z						16	50	5.0	3.0W
1N5073	S	1N4746A	1N4728	Z						18	40	5.0	3.0W
1N5074	S	1N4748A	1N4728	Z						22	30	5.0	3.0W
1N5075	S	1N4749A	1N4728	Z						24	30	5.0	3.0W
1N5076	S	1N4750A	1N4728	Z						27	25	5.0	3.0W
1N5077	S	1N4751A	1N4728	Z						30	25	5.0	3.0W
1N5078	S	1N4752A	1N4728	Z						33	20	5.0	3.0W
1N5079	S	1N4753A	1N4728	Z						36	20	5.0	3.0W
1N5080	S	1N4754A	1N4728	Z						39	20	5.0	3.0W
1N5081	S	1M40ZS5		Z						40	20	5.0	3.0W
1N5081	S	1M40ZS5		Z						40	20	5.0	3.0W
1N5082	S	1N4755A	1N4728	Z						43	15	5.0	3.0W
1N5083	S	1M45ZS5		Z						45	15	5.0	3.0W
1N5084	S	1N4756A	1N4728	Z						47	15	5.0	3.0W
1N5085	S	1M50ZS5		Z						50	15	5.0	3.0W
1N5086	S	1N4757A	1N4728	Z						51	15	5.0	3.0W
1N5087	S	1N4758A	1N4728	Z						56	10	5.0	3.0W
1N5088	S	1M60ZS5		Z						60	10	5.0	3.0W
1N5089	S	1N4759A	1N4728	Z						62	10	5.0	3.0W
1N5090	S	1N4760A		Z						68	10	5.0	3.0W
1N5091	S	1M70ZS5		Z						70	10	5.0	3.0W
1N5092	S	1N4761A	1N4728	Z						75	10	5.0	3.0W
1N5093	S	1M80ZS5		Z						80	10	5.0	3.0W
1N5094	S	1N4762A	1N4728	Z						82	10	5.0	3.0W
1N5095	S	1N4763A	1N4728	Z						91	8.0	5.0	3.0W
1N5096	S	1M110ZS5	1N4728	Z						110	5.0	5.0	3.0W
1N5097	S	1M120ZS5	1N4728	Z						120	5.0	5.0	3.0W
1N5098	S	1M130ZS5	1N4728	Z						130	5.0	5.0	3.0W
1N5099	S	1M140ZS5	1N4728	Z						140	5.0	5.0	3.0W
1N5100	S	1M160ZS5	1N4728	Z						160	4.0	5.0	3.0W
1N5101	S	1M170ZS5	1N4728	Z						170	4.0	5.0	3.0W
1N5102	S	1M180ZS5	1N4728	Z						180	4.0	5.0	3.0W
1N5103	S	1M190ZS5	1N4728	Z						190	4.0	5.0	3.0W
1N5104	S	1M200ZS5	1N4728	Z						200	3.0	5.0	3.0W
1N5105	S	1M110ZSB5	1N4728	Z						220	3.0	5.0	3.0W
1N5106	S	1M120ZSB5	1N4728	Z						240	3.0	5.0	3.0W
1N5107	S	1M130ZSB5	1N4728	Z						260	3.0	5.0	3.0W
1N5108	S	1M135ZSB5	1N4728	Z						270	3.0	5.0	3.0W
1N5109	S	1M140ZSB5	1N4728	Z						280	3.0	5.0	3.0W
1N5110	S	1M150ZSB5	1N4728	Z						300	3.0	5.0	3.0W
1N5111	S	1M160ZSB5	1N4728	Z						320	2.0	5.0	3.0W
1N5112	S	1M165ZSB5	1N4728	Z						330	2.0	5.0	3.0W
1N5113	S	1M170ZSB5	1N4728	Z						340	2.0	5.0	3.0W
1N5114	S	1M180ZSB5	1N4728	Z						360	2.0	5.0	3.0W
1N5115	S	1M190ZSB5	1N4728	Z						380	2.0	5.0	3.0W
1N5116	S	1M195ZSB5	1N4728	Z						390	2.0	5.0	3.0W
1N5117	S			Z						400	2.0	5.0	3.0W
1N5118	S	1N5341B	1N5333	Z						14	100	5.0	5.0W
1N5119	S			Z						40	30	5.0	5.0W
1N5120	S			Z						45	30	5.0	5.0W
1N5121	S			Z						50	25	5.0	5.0W
1N5122	S	1N5371B	1N5333	Z						60	20	5.0	5.0W
1N5123	S			Z						70	20	5.0	5.0W
1N5124	S			Z						80	15	5.0	5.0W
1N5125	S			Z						90	15	5.0	5.0W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N5126	S	1N5382B	1N5333	Z						140	8.0	5.0	5.0W
1N5127	S	1N5385B	1N5333	Z						170	8.0	5.0	5.0W
1N5128	S	1N5387B	1N5333	Z						190	5.0	5.0	5.0W
1N5129	S			Z						260	5.0	5.0	5.0W
1N5130	S			Z						280	4.0	5.0	5.0W
1N5131	S			Z						320	4.0	5.0	5.0W
1N5132	S			Z						340	4.0	5.0	5.0W
1N5133	S			Z						380	3.0	5.0	5.0W
1N5134	S			Z							3.0	5.0	5.0W
1N5136			Table 3	V									
thru													
1N5148			Table 3	V									
1N5136A			Table 3	V									
thru													
1N5148A			Table 3	V									
1N5150A			Table 3	V									
1N5152A			Table 3	V									
1N5153A			Table 3	V									
1N5155A			Table 3	V									
1N5156			Table 3	V									
thru													
1N5157			Table 3	V									
1N5158			Table 6	4									
thru													
1N5160			Table 6	4									
1N5163	S			S	35	1.0	200m		0.5n				
1N5164				S	35	1.0	300m		0.4n				
1N5165,A			Table 4	M									
1N5166,A			Table 4	M									
1N5167,A			Table 4	M									
1N5168			Table 4	M									
1N5169			Table 4	M									
1N5170	S	1N4001	1N4001	G	15	1.2	2.0	0.025	200				
1N5171	S	1N4002	1N4001	G	50	1.2	2.0	0.025	200				
1N5172	S	1N4002	1N4001	G	100	1.2	2.0	0.025	200				
1N5173	S	1N4004	1N4001	G	300	1.2	2.0	0.025	200				
1N5174	S	1N4004	1N4001	G	400	1.2	2.0	0.025	200				
1N5175	S	1N4005	1N4001	G	500	1.2	2.0	0.025	200				
1N5176	S	1N4005	1N4001	G	600	1.2	2.0	0.025	200				
1N5177	S	1N4006	1N4001	G	800	1.2	2.0	0.025	200				
1N5178	S	1N4007	1N4001	G	1000	1.2	2.0	0.025	200				
1N5179	S			S		2.8	1.0	50	200				
1N5180	S			G	100	1.25	4.0	100	100				
1N5181	S			G	4000		0.6	0.02					
1N5182	S			G	5000		0.6	0.02					
1N5183	S			G	7500		0.6	0.02					
1N5184	S			G	10000		0.6	0.02					
1N5185	S	MR850	MR850	G	50	1.1	3.0	0.100	80				
1N5185A	S	MR850	MR850	G	50	1.1	4.0	0.022	80				
1N5186	S	MR851	MR850	G	100	1.1	3.0	0.100	80				
1N5186A	S	MR851	MR850	G	100	1.1	4.0	0.022	80				
1N5187	S	MR852	MR850	G	200	1.1	3.0	0.100	80				
1N5187A	S	MR852	MR850	G	200	1.1	4.0	0.022	80				
1N5188	S	MR854	MR850	G	400	1.1	3.0	0.100	80				
1N5188A	S	MR854	MR850	G	400	1.1	4.0	0.022	80				
1N5189	S	MR856	MR850	G	500	1.1	3.0	0.100	80				
1N5189A	S	MR856	MR850	G	500	1.1	4.0	0.022	80				
1N5190	S	MR856	MR850	G	600	1.1	3.0	0.100	80				
1N5190A	S	MR856	MR850	G	600	1.1	4.0	0.022	80				
1N5197	S	MR501	MR501	G	50		2.0	0.1					
1N5198	S	MR501	MR501	G	100		2.0	0.1					
1N5199	S	MR502	MR501	G	200		2.0	0.1					
1N5200	S	MR504	MR501	G	400		2.0	0.1					
1N5201	S	MR506	MR501	G	600		2.0	0.1					
1N5206	S			G	400	1.1	2.0	0.003	25				
1N5207	S			G	400	1.25	4.0	0.005	100				
1N5211	S			G	200	1.2	1.0	0.2	50				
1N5212	S			G	400	1.2	1.0	0.2	50				
1N5213	S			G	600	1.2	1.0	0.2	50				
1N5214	S			G	800	1.2	0.75	0.2	50				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N5215	S			G	200	1.2	1.0	0.2	50				
1N5216	S			G	400	1.2	1.0	0.2	50				
1N5217	S			G	600	1.2	1.0	0.2	50				
1N5218	S			G	800	1.2	0.75	0.2	50				
1N5219	S			S	30	1.0	50	50	0.002				
1N5220	S			S	30	1.2	50	50					
★1N5221	S		1N5221	Z						2.4	20	10	500m
★1N5221A	S		1N5221	Z						2.4	20	10	500m
★1N5221B	S		1N5221	Z						2.4	20	5.0	500m
★1N5222	S		1N5221	Z						2.5	20	10	500m
★1N5222A	S		1N5221	Z						2.5	20	10	500m
★1N5222B	S		1N5221	Z						2.5	20	5.0	500m
★1N5223	S		1N5221	Z						2.7	20	10	500m
★1N5223A	S		1N5221	Z						2.7	20	10	500m
★1N5223B	S		1N5221	Z						2.7	20	5.0	500m
★1N5224	S		1N5221	Z						2.8	20	10	500m
★1N5224A	S		1N5221	Z						2.8	20	10	500m
★1N5224B	S		1N5221	Z						2.8	20	5.0	500m
★1N5225	S		1N5221	Z						3.0	20	10	500m
★1N5225A	S		1N5221	Z						3.0	20	10	500m
★1N5225B	S		1N5221	Z						3.0	20	5.0	500m
★1N5226	S		1N5221	Z						3.3	20	10	500m
★1N5226A	S		1N5221	Z						3.3	20	10	500m
★1N5226B	S		1N5221	Z						3.3	20	5.0	500m
★1N5227	S		1N5221	Z						3.6	20	10	500m
★1N5227A	S		1N5221	Z						3.6	20	10	500m
★1N5227B	S		1N5221	Z						3.6	20	5.0	500m
★1N5228	S		1N5221	Z						3.9	20	10	500m
★1N5228A	S		1N5221	Z						3.9	20	10	500m
★1N5228B	S		1N5221	Z						3.9	20	5.0	500m
★1N5229	S		1N5221	Z						4.3	20	10	500m
★1N5229A	S		1N5221	Z						4.3	20	10	500m
★1N5229B	S		1N5221	Z						4.3	20	5.0	500m
★1N5230	S		1N5221	Z						4.7	20	10	500m
★1N5230A	S		1N5221	Z						4.7	20	10	500m
★1N5230B	S		1N5221	Z						4.7	20	5.0	500m
★1N5231	S		1N5221	Z						5.1	20	10	500m
★1N5231A	S		1N5221	Z						5.1	20	10	500m
★1N5231B	S		1N5221	Z						5.1	20	5.0	500m
★1N5232	S		1N5221	Z						5.6	20	10	500m
★1N5232A	S		1N5221	Z						5.6	20	10	500m
★1N5232B	S		1N5221	Z						5.6	20	5.0	500m
★1N5233	S		1N5221	Z						6.0	20	10	500m
★1N5233A	S		1N5221	Z						6.0	20	10	500m
★1N5233B	S		1N5221	Z						6.0	20	5.0	500m
★1N5234	S		1N5221	Z						6.2	20	10	500m
★1N5234A	S		1N5221	Z						6.2	20	10	500m
★1N5234B	S		1N5221	Z						6.2	20	5.0	500m
★1N5235	S		1N5221	Z						6.8	20	10	500m
★1N5235A	S		1N5221	Z						6.8	20	10	500m
★1N5235B	S		1N5221	Z						6.8	20	5.0	500m
★1N5236	S		1N5221	Z						7.5	20	10	500m
★1N5236A	S		1N5221	Z						7.5	20	10	500m
★1N5236B	S		1N5221	Z						7.5	20	5.0	500m
★1N5237	S		1N5221	Z						8.2	20	10	500m
★1N5237A	S		1N5221	Z						8.2	20	10	500m
★1N5237B	S		1N5221	Z						8.2	20	5.0	500m
★1N5238	S		1N5221	Z						8.7	20	10	500m
★1N5238A	S		1N5221	Z						8.7	20	10	500m
★1N5238B	S		1N5221	Z						8.7	20	5.0	500m
★1N5239	S		1N5221	Z						9.1	20	10	500m
★1N5239A	S		1N5221	Z						9.1	20	10	500m
★1N5239B	S		1N5221	Z						9.1	20	5.0	500m
★1N5240	S		1N5221	Z						10	20	10	500m
★1N5240A	S		1N5221	Z						10	20	10	500m
★1N5240B	S		1N5221	Z						10	20	5.0	500m
★1N5241	S		1N5221	Z						11	20	10	500m
★1N5241A	S		1N5221	Z						11	20	10	500m
★1N5241B	S		1N5221	Z						11	20	5.0	500m
★1N5242	S		1N5221	Z						12	20	10	500m

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N5242A	S		1N5221	Z						12	20	10	500m
★1N5242B	S		1N5221	Z						12	20	5.0	500m
★1N5243	S		1N5221	Z						13	9.5	10	500m
★1N5243A	S		1N5221	Z						13	9.5	10	500m
★1N5243B	S		1N5221	Z						13	9.5	5.0	500m
★1N5244	S		1N5221	Z						14	9.0	10	500m
★1N5244A	S		1N5221	Z						14	9.0	10	500m
★1N5244B	S		1N5221	Z						14	9.0	5.0	500m
★1N5245	S		1N5221	Z						15	8.5	10	500m
★1N5245A	S		1N5221	Z						15	8.5	10	500m
★1N5245B	S		1N5221	Z						15	8.5	5.0	500m
★1N5246	S		1N5221	Z						16	7.8	10	500m
★1N5246A	S		1N5221	Z						16	7.8	10	500m
★1N5246B	S		1N5221	Z						16	7.8	5.0	500m
★1N5247	S		1N5221	Z						17	7.4	10	500m
★1N5247A	S		1N5221	Z						17	7.4	10	500m
★1N5247B	S		1N5221	Z						17	7.4	5.0	500m
★1N5248	S		1N5221	Z						18	7.0	10	500m
★1N5248A	S		1N5221	Z						18	7.0	10	500m
★1N5248B	S		1N5221	Z						18	7.0	5.0	500m
★1N5249	S		1N5221	Z						19	6.6	10	500m
★1N5249A	S		1N5221	Z						19	6.6	10	500m
★1N5249B	S		1N5221	Z						19	6.6	5.0	500m
★1N5250	S		1N5221	Z						20	6.2	10	500m
★1N5250A	S		1N5221	Z						20	6.2	10	500m
★1N5250B	S		1N5221	Z						20	6.2	5.0	500m
★1N5251	S		1N5221	Z						22	5.6	10	500m
★1N5251A	S		1N5221	Z						22	5.6	10	500m
★1N5251B	S		1N5221	Z						22	5.6	5.0	500m
★1N5252	S		1N5221	Z						24	5.2	10	500m
★1N5252A	S		1N5221	Z						24	5.2	10	500m
★1N5252B	S		1N5221	Z						24	5.2	5.0	500m
★1N5253	S		1N5221	Z						25	5.0	10	500m
★1N5253A	S		1N5221	Z						25	5.0	10	500m
★1N5253B	S		1N5221	Z						25	5.0	5.0	500m
★1N5254	S		1N5221	Z						27	4.6	10	500m
★1N5254A	S		1N5221	Z						27	4.6	10	500m
★1N5254B	S		1N5221	Z						27	4.6	5.0	500m
★1N5255	S		1N5221	Z						28	4.5	10	500m
★1N5255A	S		1N5221	Z						28	4.5	10	500m
★1N5255B	S		1N5221	Z						28	4.5	5.0	500m
★1N5256	S		1N5221	Z						30	4.2	10	500m
★1N5256A	S		1N5221	Z						30	4.2	10	500m
★1N5256B	S		1N5221	Z						30	4.2	5.0	500m
★1N5257	S		1N5221	Z						33	3.8	10	500m
★1N5257A	S		1N5221	Z						33	3.8	10	500m
★1N5257B	S		1N5221	Z						33	3.8	5.0	500m
★1N5258	S		1N5221	Z						36	3.4	10	500m
★1N5258A	S		1N5221	Z						36	3.4	10	500m
★1N5258B	S		1N5221	Z						36	3.4	5.0	500m
★1N5259	S		1N5221	Z						39	3.2	10	500m
★1N5259A	S		1N5221	Z						39	3.2	10	500m
★1N5259B	S		1N5221	Z						39	3.2	5.0	500m
★1N5260	S		1N5221	Z						43	3.0	10	500m
★1N5260A	S		1N5221	Z						43	3.0	10	500m
★1N5260B	S		1N5221	Z						43	3.0	5.0	500m
★1N5261	S		1N5221	Z						47	2.7	10	500m
★1N5261A	S		1N5221	Z						47	2.7	10	500m
★1N5261B	S		1N5221	Z						47	2.7	5.0	500m
★1N5262	S		1N5221	Z						51	2.5	10	500m
★1N5262A	S		1N5221	Z						51	2.5	10	500m
★1N5262B	S		1N5221	Z						51	2.5	5.0	500m
★1N5263	S		1N5221	Z						56	2.2	10	500m
★1N5263A	S		1N5221	Z						56	2.2	10	500m
★1N5263B	S		1N5221	Z						56	2.2	5.0	500m
★1N5264	S		1N5221	Z						60	2.1	10	500m
★1N5264A	S		1N5221	Z						60	2.1	10	500m
★1N5264B	S		1N5221	Z						60	2.1	5.0	500m
★1N5265	S		1N5221	Z						62	2.0	10	500m
★1N5265A	S		1N5221	Z						62	2.0	10	500m

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N5265B	S		1N5221	Z						62	2.0	5.0	500m
★1N5266	S		1N5221	Z						68	1.8	10	500m
★1N5266A	S		1N5221	Z						68	1.8	10	500m
★1N5266B	S		1N5221	Z						68	1.8	5.0	500m
★1N5267	S		1N5221	Z						75	1.7	10	500m
★1N5267A	S		1N5221	Z						75	1.7	10	500m
★1N5267B	S		1N5221	Z						75	1.7	5.0	500m
★1N5268	S		1N5221	Z						82	1.5	10	500m
★1N5268A	S		1N5221	Z						82	1.5	10	500m
★1N5268B	S		1N5221	Z						82	1.5	5.0	500m
★1N5269	S		1N5221	Z						87	1.4	10	500m
★1N5269A	S		1N5221	Z						87	1.4	10	500m
★1N5269B	S		1N5221	Z						87	1.4	5.0	500m
★1N5270	S		1N5221	Z						91	1.4	10	500m
★1N5270A	S		1N5221	Z						91	1.4	10	500m
★1N5270B	S		1N5221	Z						91	1.4	5.0	500m
★1N5271	S		1N5221	Z						100	1.3	10	500m
★1N5271A	S		1N5221	Z						100	1.3	10	500m
★1N5271B	S		1N5221	Z						100	1.3	5.0	500m
★1N5272	S		1N5221	Z						110	1.1	10	500m
★1N5272A	S		1N5221	Z						110	1.1	10	500m
★1N5272B	S		1N5221	Z						110	1.1	5.0	500m
★1N5273	S		1N5221	Z						120	1.0	10	500m
★1N5273A	S		1N5221	Z						120	1.0	10	500m
★1N5273B	S		1N5221	Z						120	1.0	5.0	500m
★1N5274	S		1N5221	Z						130	0.95	10	500m
★1N5274A	S		1N5221	Z						130	0.95	10	500m
★1N5274B	S		1N5221	Z						130	0.95	5.0	500m
★1N5275	S		1N5221	Z						140	0.90	10	500m
★1N5275A	S		1N5221	Z						140	0.90	10	500m
★1N5275B	S		1N5221	Z						140	0.90	5.0	500m
★1N5276	S		1N5221	Z						150	0.85	10	500m
★1N5276A	S		1N5221	Z						150	0.85	10	500m
★1N5276B	S		1N5221	Z						150	0.85	5.0	500m
★1N5277	S		1N5221	Z						160	0.80	10	500m
★1N5277A	S		1N5221	Z						160	0.80	10	500m
★1N5277B	S		1N5221	Z						160	0.80	5.0	500m
★1N5278	S		1N5221	Z						170	0.74	10	500m
★1N5278A	S		1N5221	Z						170	0.74	10	500m
★1N5278B	S		1N5221	Z						170	0.74	5.0	500m
★1N5279	S		1N5221	Z						180	0.68	10	500m
★1N5279A	S		1N5221	Z						180	0.68	10	500m
★1N5279B	S		1N5221	Z						180	0.68	5.0	500m
★1N5280	S		1N5221	Z						190	0.66	10	500m
★1N5280A	S		1N5221	Z						190	0.66	10	500m
★1N5280B	S		1N5221	Z						190	0.66	5.0	500m
★1N5281	S		1N5221	Z						200	0.65	10	500m
★1N5281A	S		1N5221	Z						200	0.65	10	500m
★1N5281B	S		1N5221	Z						200	0.65	5.0	500m
1N5282	S			S	55	1.3	500m	0.1*	0.004				
1N5283 thru 1N5314				I									
1N5315	S			S	75	0.49	0.1m	0.05*	0.004				
1N5316	S			S	75	0.49	0.1m	0.05*	0.004				
1N5317	S			S	55	1.17	500m	0.1*	0.004				
1N5318	S			S	50	0.87	200m	0.1*	0.004				
1N5319	S			S	25	1.0	100m	100*	0.004				
1N5320	S			G	100		1.0		20				
1N5324	S			G	15000	24	0.010	0.025	0.75				
1N5326	S			G	100		12		200				
1N5329	S			G	100		0.135	0.150	10				
1N5330	S			G	100		0.540	0.150	15				
1N5331	S			G	1200		12		240				
1N5332	S			G	1200		35		500				
★1N5333	S		1N5333	Z						3.3	380	20	5.0W
★1N5333A	S		1N5333	Z						3.3	380	10	5.0W
★1N5333B	S		1N5333	Z						3.3	380	5	5.0W
★1N5334	S		1N5333	Z						3.6	350	20	5.0W
★1N5334A	S		1N5333	Z						3.6	350	10	5.0W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N5334B	S		1N5333	Z						3.6	350	5	5.0W
★1N5335	S		1N5333	Z						3.9	320	20	5.0W
★1N5335A	S		1N5333	Z						3.9	320	10	5.0W
★1N5335B	S		1N5333	Z						3.9	320	5	5.0W
★1N5336	S		1N5333	Z						4.3	290	20	5.0W
★1N5336A	S		1N5333	Z						4.3	290	10	5.0W
★1N5336B	S		1N5333	Z						4.3	290	5	5.0W
★1N5337	S		1N5333	Z						4.7	260	20	5.0W
★1N5337A	S		1N5333	Z						4.7	260	10	5.0W
★1N5337B	S		1N5333	Z						4.7	260	5	5.0W
★1N5338	S		1N5333	Z						5.1	240	20	5.0W
★1N5338A	S		1N5333	Z						5.1	240	10	5.0W
★1N5338B	S		1N5333	Z						5.1	240	5	5.0W
★1N5339	S		1N5333	Z						5.6	220	20	5.0W
★1N5339A	S		1N5333	Z						5.6	220	10	5.0W
★1N5339B	S		1N5333	Z						5.6	220	5	5.0W
★1N5340	S		1N5333	Z						6.0	200	20	5.0W
★1N5340A	S		1N5333	Z						6.0	200	10	5.0W
★1N5340B	S		1N5333	Z						6.0	200	5	5.0W
★1N5341	S		1N5333	Z						6.2	200	20	5.0W
★1N5341A	S		1N5333	Z						6.2	200	10	5.0W
★1N5341B	S		1N5333	Z						6.2	200	5	5.0W
★1N5342	S		1N5333	Z						6.8	175	20	5.0W
★1N5342A	S		1N5333	Z						6.8	175	10	5.0W
★1N5342B	S		1N5333	Z						6.8	175	5	5.0W
★1N5343	S		1N5333	Z						7.5	175	20	5.0W
★1N5343A	S		1N5333	Z						7.5	175	10	5.0W
★1N5343B	S		1N5333	Z						7.5	175	5	5.0W
★1N5344	S		1N5333	Z						8.2	150	20	5.0W
★1N5344A	S		1N5333	Z						8.2	150	10	5.0W
★1N5344B	S		1N5333	Z						8.2	150	5	5.0W
★1N5345	S		1N5333	Z						8.7	150	20	5.0W
★1N5345A	S		1N5333	Z						8.7	150	10	5.0W
★1N5345B	S		1N5333	Z						8.7	150	5	5.0W
★1N5346	S		1N5333	Z						9.1	150	20	5.0W
★1N5346A	S		1N5333	Z						9.1	150	10	5.0W
★1N5346B	S		1N5333	Z						9.1	150	5	5.0W
★1N5347	S		1N5333	Z						10	125	20	5.0W
★1N5347A	S		1N5333	Z						10	125	10	5.0W
★1N5347B	S		1N5333	Z						10	125	5	5.0W
★1N5348	S		1N5333	Z						11	125	20	5.0W
★1N5348A	S		1N5333	Z						11	125	10	5.0W
★1N5348B	S		1N5333	Z						11	125	5	5.0W
★1N5349	S		1N5333	Z						12	100	20	5.0W
★1N5349A	S		1N5333	Z						12	100	10	5.0W
★1N5349B	S		1N5333	Z						12	100	5	5.0W
★1N5350	S		1N5333	Z						13	100	20	5.0W
★1N5350A	S		1N5333	Z						13	100	10	5.0W
★1N5350B	S		1N5333	Z						13	100	5	5.0W
★1N5351	S		1N5333	Z						14	100	20	5.0W
★1N5351A	S		1N5333	Z						14	100	10	5.0W
★1N5351B	S		1N5333	Z						14	100	5	5.0W
★1N5352	S		1N5333	Z						15	75	20	5.0W
★1N5352A	S		1N5333	Z						15	75	10	5.0W
★1N5352B	S		1N5333	Z						15	75	5	5.0W
★1N5353	S		1N5333	Z						16	75	20	5.0W
★1N5353A	S		1N5333	Z						16	75	10	5.0W
★1N5353B	S		1N5333	Z						16	75	5	5.0W
★1N5354	S		1N5333	Z						17	70	20	5.0W
★1N5354A	S		1N5333	Z						17	70	10	5.0W
★1N5354B	S		1N5333	Z						17	70	5	5.0W
★1N5355	S		1N5333	Z						18	65	20	5.0W
★1N5355A	S		1N5333	Z						18	65	10	5.0W
★1N5355B	S		1N5333	Z						18	65	5	5.0W
★1N5356	S		1N5333	Z						19	65	20	5.0W
★1N5356A	S		1N5333	Z						19	65	10	5.0W
★1N5356B	S		1N5333	Z						19	65	5	5.0W
★1N5357	S		1N5333	Z						20	65	20	5.0W
★1N5357A	S		1N5333	Z						20	65	10	5.0W
★1N5357B	S		1N5333	Z						20	65	5	5.0W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N5358	S		1N5333	Z						22	50	20	5.0W
★1N5358A	S		1N5333	Z						22	50	10	5.0W
★1N5358B	S		1N5333	Z						22	50	5	5.0W
★1N5359	S		1N5333	Z						24	50	20	5.0W
★1N5359A	S		1N5333	Z						24	50	10	5.0W
★1N5359B	S		1N5333	Z						24	50	5	5.0W
★1N5360	S		1N5333	Z						25	50	20	5.0W
★1N5360A	S		1N5333	Z						25	50	10	5.0W
★1N5360B	S		1N5333	Z						25	50	5	5.0W
★1N5361	S		1N5333	Z						27	50	20	5.0W
★1N5361A	S		1N5333	Z						27	50	10	5.0W
★1N5361B	S		1N5333	Z						27	50	5	5.0W
★1N5362	S		1N5333	Z						28	50	20	5.0W
★1N5362A	S		1N5333	Z						28	50	10	5.0W
★1N5362B	S		1N5333	Z						28	50	5	5.0W
★1N5363	S		1N5333	Z						30	40	20	5.0W
★1N5363A	S		1N5333	Z						30	40	10	5.0W
★1N5363B	S		1N5333	Z						30	40	5	5.0W
★1N5364	S		1N5333	Z						33	40	20	5.0W
★1N5364A	S		1N5333	Z						33	40	10	5.0W
★1N5364B	S		1N5333	Z						33	40	5	5.0W
★1N5365	S		1N5333	Z						36	30	20	5.0W
★1N5365A	S		1N5333	Z						36	30	10	5.0W
★1N5365B	S		1N5333	Z						36	30	5	5.0W
★1N5366	S		1N5333	Z						39	30	20	5.0W
★1N5366A	S		1N5333	Z						39	30	10	5.0W
★1N5366B	S		1N5333	Z						39	30	5	5.0W
★1N5367	S		1N5333	Z						43	30	20	5.0W
★1N5367A	S		1N5333	Z						43	30	10	5.0W
★1N5367B	S		1N5333	Z						43	30	5	5.0W
★1N5368	S		1N5333	Z						47	25	20	5.0W
★1N5368A	S		1N5333	Z						47	25	10	5.0W
★1N5368B	S		1N5333	Z						47	25	5	5.0W
★1N5369	S		1N5333	Z						51	25	20	5.0W
★1N5369A	S		1N5333	Z						51	25	10	5.0W
★1N5369B	S		1N5333	Z						51	25	5	5.0W
★1N5370	S		1N5333	Z						56	20	20	5.0W
★1N5370A	S		1N5333	Z						56	20	10	5.0W
★1N5370B	S		1N5333	Z						56	20	5	5.0W
★1N5371	S		1N5333	Z						60	20	20	5.0W
★1N5371A	S		1N5333	Z						60	20	10	5.0W
★1N5371B	S		1N5333	Z						60	20	5	5.0W
★1N5372	S		1N5333	Z						62	20	20	5.0W
★1N5372A	S		1N5333	Z						62	20	10	5.0W
★1N5372B	S		1N5333	Z						62	20	5	5.0W
★1N5373	S		1N5333	Z						68	20	20	5.0W
★1N5373A	S		1N5333	Z						68	20	10	5.0W
★1N5373B	S		1N5333	Z						68	20	5	5.0W
★1N5374	S		1N5333	Z						75	20	20	5.0W
★1N5374A	S		1N5333	Z						75	20	10	5.0W
★1N5374B	S		1N5333	Z						75	20	5	5.0W
★1N5375	S		1N5333	Z						82	15	20	5.0W
★1N5375A	S		1N5333	Z						82	15	10	5.0W
★1N5375B	S		1N5333	Z						82	15	5	5.0W
★1N5376	S		1N5333	Z						87	15	20	5.0W
★1N5376A	S		1N5333	Z						87	15	10	5.0W
★1N5376B	S		1N5333	Z						87	15	5	5.0W
★1N5377	S		1N5333	Z						91	15	20	5.0W
★1N5377A	S		1N5333	Z						91	15	10	5.0W
★1N5377B	S		1N5333	Z						91	15	5	5.0W
★1N5378	S		1N5333	Z						100	12	20	5.0W
★1N5378A	S		1N5333	Z						100	12	10	5.0W
★1N5378B	S		1N5333	Z						100	12	5	5.0W
★1N5379	S		1N5333	Z						110	12	20	5.0W
★1N5379A	S		1N5333	Z						110	12	10	5.0W
★1N5379B	S		1N5333	Z						110	12	5	5.0W
★1N5380	S		1N5333	Z						120	10	20	5.0W
★1N5380A	S		1N5333	Z						120	10	10	5.0W
★1N5380B	S		1N5333	Z						120	10	5	5.0W
★1N5381	S		1N5333	Z						130	10	20	5.0W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N5381A	S		1N5333	Z						130	10	10	5.0W
★1N5381B	S		1N5333	Z						130	10	5	5.0W
★1N5382	S		1N5333	Z						140	8.0	20	5.0W
★1N5382A	S		1N5333	Z						140	8.0	10	5.0W
★1N5382B	S		1N5333	Z						140	8.0	5	5.0W
★1N5383	S		1N5333	Z						150	8.0	20	5.0W
★1N5383A	S		1N5333	Z						150	8.0	10	5.0W
★1N5383B	S		1N5333	Z						150	8.0	5	5.0W
★1N5384	S		1N5333	Z						160	8.0	20	5.0W
★1N5384A	S		1N5333	Z						160	8.0	10	5.0W
★1N5384B	S		1N5333	Z						160	8.0	5	5.0W
★1N5385	S		1N5333	Z						170	8.0	20	5.0W
★1N5385A	S		1N5333	Z						170	8.0	10	5.0W
★1N5385B	S		1N5333	Z						170	8.0	5	5.0W
★1N5386	S		1N5333	Z						180	5.0	20	5.0W
★1N5386A	S		1N5333	Z						180	5.0	10	5.0W
★1N5386B	S		1N5333	Z						180	5.0	5	5.0W
★1N5387	S		1N5333	Z						190	5.0	20	5.0W
★1N5387A	S		1N5333	Z						190	5.0	10	5.0W
★1N5387B	S		1N5333	Z						190	5.0	5	5.0W
★1N5388	S		1N5333	Z						200	5.0	20	5.0W
★1N5388A	S		1N5333	Z						200	5.0	10	5.0W
★1N5388B	S		1N5333	Z						200	5.0	5	5.0W
1N5389	S			G	40,000	80	0.100	0.10	10				
1N5390				H									
1N5391	S	MR501	MR501	G	50		1.5		50				
1N5392	S	MR501	MR501	G	100		1.5		50				
1N5393	S	MR502	MR501	G	200		1.5		50				
1N5394	S	MR504	MR501	G	300		1.5		50				
1N5395	S	MR504	MR501	G	400		1.5		50				
1N5396	S	MR506	MR501	G	500		1.5		50				
1N5397	S	MR506	MR501	G	600		1.5		50				
1N5398	S	MR508	MR501	G	800		1.5		50				
1N5399	s	MR510	MR501	G	1000		1.5		50				
1N5400	S	MR501	MR501	G	50		3.0		200				
1N5401	S	MR501	MR501	G	100		3.0		200				
1N5402	S	MR502	MR501	G	200		3.0		200				
1N5403	S	MR504	MR501	G	300		3.0		200				
1N5404	S	MR504	MR501	G	400		3.0		200				
1N5405	S	MR506	MR501	G	500		3.0		200				
1N5406	S	MR506	MR501	G	600		3.0		200				
1N5407	S	MR508	MR501	G	800		3.0		200				
1N5408	S	MR510	MR501	G	1000		3.0		200				
1N5409	S			G	175		40		1000				
1N5410	S			G	175		12		200				
1N5411	S			3									
1N5412	S			S	30	0.500	0.1m	100n	0.002				
1N5413	S			S	55	0.500	0.1m	100n	0.002				
1N5414	S			S	75	0.500	0.1m	100n	0.002				
1N5415	S			G	50				200				
1N5416	S			G	100				200				
1N5417	S			G	200				200				
1N5418	S			G	400				200				
1N5419	S			G	500				200				
1N5420	S			G	600				200				
1N5421 thru 1N5425			Table 3	V									
			Table 3	V									
1N5426	S			S		1.0	40m	1.0*					
1N5427	S			S		1.0	10m	0.10*	0.004				
1N5428	S			S		1.0	100m	0.10*	0.050				
1N5429	S			S		1.0	200m	0.005*					
1N5430	S			S		1.0	200m	0.10*	0.004				
1N5431	S			S		1.3	500m	0.10*	0.004				
1N5432	S			S		1.3	50m	0.050*	0.75n				
1N5433	S	MR856	MR850	G	600		2.0		25				
1N5434	S	MR856	MR850	G	600		2.0		60				
1N5435	S	MR856	MR850	G	600		12		200				
1N5436				M									
1N5437				M									

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N5438			Table 4	M									
1N5439 thru 1N5476			Table 3	V									
1N5477	S			G	6000		0.6	0.350	80				
1N5478	S			G	7200		0.6	0.350	80				
1N5479	S			G	8400		0.6	0.350	80				
1N5480	S			G	9600		0.6	0.350	80				
1N5481	S			G	12000		0.6	0.350	80				
1N5482	S			G	2400		1.0	0.350	80				
1N5483	S			G	3600		1.0	0.350	80				
1N5484	S			G	4800		1.0	0.350	80				
1N5485	S			G	6000		1.0	0.350	80				
★1N5518	S		1N5518	Z						3.3	20	20	40m
★1N5518A	S		1N5518	Z						3.3	20	10	40m
★1N5518B	S		1N5518	Z						3.3	20	5.0	40m
1N5518C	S			Z						3.3	20	2.0	40m
1N5518D	S			Z						3.3	20	1.0	400m
★1N5519	S		1N5518	Z						3.6	20	20	400m
★1N5519A	S		1N5518	Z						3.6	20	10	400m
★1N5519B	S		1N5518	Z						3.6	20	5.0	400m
1N5519C	S			Z						3.6	20	2.0	400m
1N5519D	S			Z						3.6	20	1.0	400m
★1N5520	S		1N5518	Z						3.9	20	20	400m
★1N5520A	S		1N5518	Z						3.9	20	10	400m
★1N5520B	S		1N5518	Z						3.9	20	5.0	400m
1N5520C	S			Z						3.9	20	2.0	400m
1N5520D	S			Z						3.9	20	1.0	400m
★1N5521	S		1N5518	Z						4.3	20	20	400m
★1N5521A	S		1N5518	Z						4.3	20	10	400m
★1N5521B	S		1N5518	Z						4.3	20	5.0	400m
1N5521C	S			Z						4.3	20	2.0	400m
1N5521D	S			Z						4.3	20	1.0	400m
★1N5522	S		1N5518	Z						4.7	10	20	400m
★1N5522A	S		1N5518	Z						4.7	10	10	400m
★1N5522B	S		1N5518	Z						4.7	10	5.0	400m
1N5522C	S			Z						4.7	10	2.0	400m
1N5522D	S			Z						4.7	10	1.0	400m
★1N5523	S		1N5518	Z						5.1	5.0	20	400m
★1N5523A	S		1N5518	Z						5.1	5.0	10	400m
★1N5523B	S		1N5518	Z						5.1	5.0	5.0	400m
1N5523C	S			Z						5.1	5.0	2.0	400m
1N5523D	S			Z						5.1	5.0	1.0	400m
★1N5524	S		1N5518	Z						5.6	3.0	20	400m
★1N5524A	S		1N5518	Z						5.6	3.0	10	400m
★1N5524B	S		1N5518	Z						5.6	3.0	5.0	400m
1N5524C	S			Z						5.6	3.0	2.0	400m
1N5524D	S			Z						5.6	3.0	1.0	400m
★1N5525	S		1N5518	Z						6.2	1.0	20	400m
★1N5525A	S		1N5518	Z						6.2	1.0	10	400m
★1N5525B	S		1N5518	Z						6.2	1.0	5.0	400m
1N5525C	S			Z						6.2	1.0	2.0	400m
1N5525D	S			Z						6.2	1.0	1.0	400m
★1N5526	S		1N5518	Z						6.8	1.0	20	400m
★1N5526A	S		1N5518	Z						6.8	1.0	10	400m
★1N5526B	S		1N5518	Z						6.8	1.0	5.0	400m
1N5526C	S			Z						6.8	1.0	2.0	400m
1N5526D	S			Z						6.8	1.0	1.0	400m
★1N5527	S		1N5518	Z						7.5	1.0	20	400m
★1N5527A	S		1N5518	Z						7.5	1.0	10	400m
★1N5527B	S		1N5518	Z						7.5	1.0	5.0	400m
1N5527C	S			Z						7.5	1.0	2.0	400m
1N5527D	S			Z						7.5	1.0	1.0	400m
★1N5528	S		1N5518	Z						8.2	1.0	20	400m
★1N5528A	S		1N5518	Z						8.2	1.0	10	400m
★1N5528B	S		1N5518	Z						8.2	1.0	5.0	400m
1N5528C	S			Z						8.2	1.0	2.0	400m
1N5528D	S			Z						8.2	1.0	1.0	400m
★1N5529	S		1N5518	Z						9.1	1.0	20	400m
★1N5529A	S		1N5518	Z						9.1	1.0	10	400m

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N5529B	S		1N5518	Z						9.1	1.0	5.0	400m
1N5529C	S			Z						9.1	1.0	2.0	400m
1N5529D	S			Z						9.1	1.0	1.0	400m
★1N5530	S		1N5518	Z						10	1.0	20	400m
★1N5530A	S		1N5518	Z						10	1.0	10	400m
★1N5530B	S		1N5518	Z						10	1.0	5.0	400m
1N5530C	S			Z						10	1.0	2.0	400m
1N5530D	S			Z						10	1.0	1.0	400m
★1N5531	S		1N5518	Z						11	1.0	20	400m
★1N5531A	S		1N5518	Z						11	1.0	10	400m
★1N5531B	S		1N5518	Z						11	1.0	5.0	400m
1N5531C	S			Z						11	1.0	2.0	400m
1N5531D	S			Z						11	1.0	1.0	400m
★1N5532	S		1N5518	Z						12	1.0	20	400m
★1N5532A	S		1N5518	Z						12	1.0	10	400m
★1N5532B	S		1N5518	Z						12	1.0	5.0	400m
1N5532C	S			Z						12	1.0	2.0	400m
1N5532D	S			Z						12	1.0	1.0	400m
★1N5533	S		1N5518	Z						13	1.0	20	400m
★1N5533A	S		1N5518	Z						13	1.0	10	400m
★1N5533B	S		1N5518	Z						13	1.0	5.0	400m
1N5533C	S			Z						13	1.0	2.0	400m
1N5533D	S			Z						13	1.0	1.0	400m
★1N5534	S		1N5518	Z						14	1.0	20	400m
★1N5534A	S		1N5518	Z						14	1.0	10	400m
★1N5534B	S		1N5518	Z						14	1.0	5.0	400m
1N5534C	S			Z						14	1.0	2.0	400m
1N5534D	S			Z						14	1.0	1.0	400m
★1N5535	S		1N5518	Z						15	1.0	20	400m
★1N5535A	S		1N5518	Z						15	1.0	10	400m
★1N5535B	S		1N5518	Z						15	1.0	5.0	400m
1N5535C	S			Z						15	1.0	2.0	400m
1N5535D	S			Z						15	1.0	1.0	400m
★1N5536	S		1N5518	Z						16	1.0	20	400m
★1N5536A	S		1N5518	Z						16	1.0	10	400m
★1N5536B	S		1N5518	Z						16	1.0	5.0	400m
1N5536C	S			Z						16	1.0	2.0	400m
1N5536D	S			Z						16	1.0	1.0	400m
★1N5537	S		1N5518	Z						17	1.0	20	400m
★1N5537A	S		1N5518	Z						17	1.0	10	400m
★1N5537B	S		1N5518	Z						17	1.0	5.0	400m
1N5537C	S			Z						17	1.0	2.0	400m
1N5537D	S			Z						17	1.0	1.0	400m
★1N5538	S		1N5518	Z						18	1.0	20	400m
★1N5538A	S		1N5518	Z						18	1.0	10	400m
★1N5538B	S		1N5518	Z						18	1.0	5.0	400m
1N5538C	S			Z						18	1.0	2.0	400m
1N5538D	S			Z						18	1.0	1.0	400m
★1N5539	S		1N5518	Z						19	1.0	20	400m
★1N5539A	S		1N5518	Z						19	1.0	10	400m
★1N5539B	S		1N5518	Z						19	1.0	5.0	400m
1N5539C	S			Z						19	1.0	2.0	400m
1N5539D	S			Z						19	1.0	1.0	400m
★1N5540	S		1N5518	Z						20	1.0	20	400m
★1N5540A	S		1N5518	Z						20	1.0	10	400m
★1N5540B	S		1N5518	Z						20	1.0	5.0	400m
1N5540C	S			Z						20	1.0	2.0	400m
1N5540D	S			Z						20	1.0	1.0	400m
★1N5541	S		1N5518	Z						22	1.0	20	400m
★1N5541A	S		1N5518	Z						22	1.0	10	400m
★1N5541B	S		1N5518	Z						22	1.0	5.0	400m
1N5541C	S			Z						22	1.0	2.0	400m
1N5541D	S			Z						22	1.0	1.0	400m
★1N5542	S		1N5518	Z						24	1.0	20	400m
★1N5542A	S		1N5518	Z						24	1.0	10	400m
★1N5542B	S		1N5518	Z						24	1.0	5.0	400m
1N5542C	S			Z						24	1.0	2.0	400m
1N5542D	S			Z						24	1.0	1.0	400m
★1N5543	S		1N5518	Z						25	1.0	20	400m
★1N5543A	S		1N5518	Z						25	1.0	10	400m

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N5543B	S		1N5518	Z						25	1.0	5.0	400m
1N5543C	S			Z						25	1.0	2.0	400m
1N5543D	S			Z						25	1.0	1.0	400m
★1N5544	S		1N5518	Z						28	1.0	20	400m
★1N5544A	S		1N5518	Z						28	1.0	10	400m
★1N5544B	S		1N5518	Z						28	1.0	5.0	400m
1N5544C	S			Z						28	1.0	2.0	400m
1N5544D	S			Z						28	1.0	1.0	400m
★1N5545	S		1N5518	Z						30	1.0	20	400m
★1N5545A	S		1N5518	Z						30	1.0	10	400m
★1N5545B	S		1N5518	Z						30	1.0	5.0	400m
1N5545C	S			Z						30	1.0	2.0	400m
1N5545D	S			Z						30	1.0	1.0	400m
★1N5546	S		1N5518	Z						33	1.0	20	400m
★1N5546A	S		1N5518	Z						33	1.0	10	400m
★1N5546B	S		1N5518	Z						33	1.0	5.0	400m
1N5546C	S			Z						33	1.0	2.0	400m
1N5546D	S			Z						33	1.0	1.0	400m
1N5550	S	MR502	MR501	G	200	1.0	3.0	0.025	150				
1N5551	S	MR504	MR501	G	400	1.0	3.0	0.025	150				
1N5552	S	MR506	MR501	G	600	1.0	3.0	0.025	150				
1N5553	S	MR508	MR501	G	800	1.1	3.0	0.025	150				
1N5554	S	MR510	MR501	G	1000	1.1	3.0	0.025	150				
1N5555 thru			Table 2	P									
1N5558			Table 2	P									
1N5559	S			Z						6.8	37	20	1.0W
1N5559A	S			Z						6.8	37	10	1.0W
1N5559B	S			Z						6.8	37	5.0	1.0W
1N5560	S			Z						7.5	34	20	1.0W
1N5560A	S			Z						7.5	34	10	1.0W
1N5560B	S			Z						7.5	34	5.0	1.0W
1N5561	S			Z						8.2	31	20	1.0W
1N5561A	S			Z						8.2	31	10	1.0W
1N5561B	S			Z						8.2	31	5.0	1.0W
1N5562	S			Z						9.1	28	20	1.0W
1N5562A	S			Z						9.1	28	10	1.0W
1N5562B	S			Z						9.1	28	5.0	1.0W
1N5563	S			Z						10	25	20	1.0W
1N5563A	S			Z						10	25	10	1.0W
1N5563B	S			Z						10	25	5.0	1.0W
1N5564	S			Z						11	23	20	1.0W
1N5564A	S			Z						11	23	10	1.0W
1N5564B	S			Z						11	23	5.0	1.0W
1N5565	S			Z						12	21	20	1.0W
1N5565A	S			Z						12	21	10	1.0W
1N5565B	S			Z						12	21	5.0	1.0W
1N5566	S			Z						13	19	20	1.0W
1N5566A	S			Z						13	19	10	1.0W
1N5566B	S			Z						13	19	5.0	1.0W
1N5567	S			Z						15	17	20	1.0W
1N5567A	S			Z						15	17	10	1.0W
1N5567B	S			Z						15	17	5.0	1.0W
1N5568	S			Z						16	15	20	1.0W
1N5568A	S			Z						16	15	10	1.0W
1N5568B	S			Z						16	15	5.0	1.0W
1N5569	S			Z						18	14	20	1.0W
1N5569A	S			Z						18	14	10	1.0W
1N5569B	S			Z						18	14	5.0	1.0W
1N5570	S			Z						20	12	20	1.0W
1N5570A	S			Z						20	12	10	1.0W
1N5570B	S			Z						20	12	5.0	1.0W
1N5571	S			Z						22	11	20	1.0W
1N5571A	S			Z						22	11	10	1.0W
1N5571B	S			Z						22	11	5.0	1.0W
1N5572	S			Z						24	10	20	1.0W
1N5572A	S			Z						24	10	10	1.0W
1N5572B	S			Z						24	10	5.0	1.0W
1N5573	S			Z						27	9.5	20	1.0W
1N5573A	S			Z						27	9.5	10	1.0W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N5573B	S			Z						27	9.5	5.0	1.0W
1N5574	S			Z						30	8.5	20	1.0W
1N5574A	S			Z						30	8.5	10	1.0W
1N5574B	S			Z						30	8.5	5.0	1.0W
1N5575	S			Z						33	7.5	20	1.0W
1N5575A	S			Z						33	7.5	10	1.0W
1N5575B	S			Z						33	7.5	5.0	1.0W
1N5576	S			Z						36	7.0	20	1.0W
1N5576A	S			Z						36	7.0	10	1.0W
1N5576B	S			Z						36	7.0	5.0	1.0W
1N5577	S			Z						39	6.5	20	1.0W
1N5577A	S			Z						39	6.5	10	1.0W
1N5577B	S			Z						39	6.5	5.0	1.0W
1N5578	S			Z						43	6.0	20	1.0W
1N5578A	S			Z						43	6.0	10	1.0W
1N5578B	S			Z						43	6.0	5.0	1.0W
1N5579	S			Z						47	5.5	20	1.0W
1N5579A	S			Z						47	5.5	10	1.0W
1N5579B	S			Z						47	5.5	5.0	1.0W
1N5580	S			Z						51	5.0	20	1.0W
1N5580A	S			Z						51	5.0	10	1.0W
1N5580B	S			Z						51	5.0	5.0	1.0W
1N5581	S			Z						56	4.5	20	1.0W
1N5581A	S			Z						56	4.5	10	1.0W
1N5581B	S			Z						56	4.5	5.0	1.0W
1N5582	S			Z						62	4.0	20	1.0W
1N5582A	S			Z						62	4.0	10	1.0W
1N5582B	S			Z						62	4.0	5.0	1.0W
1N5583	S			Z						68	3.7	20	1.0W
1N5583A	S			Z						68	3.7	10	1.0W
1N5583B	S			Z						68	3.7	5.0	1.0W
1N5584	S			Z						75	3.3	20	1.0W
1N5584A	S			Z						75	3.3	10	1.0W
1N5584B	S			Z						75	3.3	5.0	1.0W
1N5585	S			Z						82	3.0	20	1.0W
1N5585A	S			Z						82	3.0	10	1.0W
1N5585B	S			Z						82	3.0	5.0	1.0W
1N5586	S			Z						91	2.8	20	1.0W
1N5586A	S			Z						91	2.8	10	1.0W
1N5586B	S			Z						91	2.8	5.0	1.0W
1N5587	S			Z						100	2.5	20	1.0W
1N5587A	S			Z						100	2.5	10	1.0W
1N5587B	S			Z						100	2.5	5.0	1.0W
1N5588	S			Z						110	2.3	20	1.0W
1N5588A	S			Z						110	2.3	10	1.0W
1N5588B	S			Z						110	2.3	5.0	1.0W
1N5589	S			Z						120	2.0	20	1.0W
1N5589A	S			Z						120	2.0	10	1.0W
1N5589B	S			Z						120	2.0	5.0	1.0W
1N5590	S			Z						130	1.9	20	1.0W
1N5590A	S			Z						130	1.9	10	1.0W
1N5590B	S			Z						130	1.9	5.0	1.0W
1N5591	S			Z						150	1.7	20	1.0W
1N5591A	S			Z						150	1.7	10	1.0W
1N5591B	S			Z						150	1.7	5.0	1.0W
1N5592	S			Z						160	1.6	20	1.0W
1N5592A	S			Z						160	1.6	10	1.0W
1N5592B	S			Z						160	1.6	5.0	1.0W
1N5593	S			Z						180	1.4	20	1.0W
1N5593A	S			Z						180	1.4	10	1.0W
1N5593B	S			Z						180	1.4	5.0	1.0W
1N5594	S			Z						200	1.2	20	1.0W
1N5594A	S			Z						200	1.2	10	1.0W
1N5594B	S			Z						200	1.2	5.0	1.0W
1N5595	S			G	5000	7.4	1.15	0.30	30				
1N5596	S			G	7500	11	0.87	0.30	30				
1N5597	S			G	10,000	14.5	0.70	0.30	30				
1N5598	S			G	15,000	23	0.47	0.30	30				
1N5599	S			G	2500	3.7	2.1	0.75	100				
1N5600	S			G	5000	7.4	1.4	0.75	100				

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} µs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N5601	S			G	7500	11	0.92	0.75	100				
1N5602	S			G	2500	5.0	4.6	1.0	200				
1N5603	S			G	5000	9.0	3.5	1.0	200				
1N5604	S			G	7500	12	2.3	1.0	200				
1N5605	S			S	70	1.0	20m	25n					
1N5606	S			S	150	1.0	7.0m	25n					
1N5607	S			S	200	1.0	3.0m	25n					
1N5608	S			S	120	1.0	100m	50n					
1N5609	S			S	120	1.0	6.0m	5.0*					
1N5610			Table 2	P									
thru													
1N5613			Table 2	P									
1N5614	S			G	200	1.2	1.0	0.0025	50				
1N5615	S			G	200	1.2	1.0	0.0025	50				
1N5616	S			G	400	1.2	1.0	0.0025	50				
1N5617	S			G	400	1.2	1.0	0.0025	50				
1N5618	S			G	600	1.2	1.0	0.0025	50				
1N5619	S			G	600	1.2	1.0	0.0025	50				
1N5620	S			G	800	1.2	1.0	0.0025	50				
1N5621	S			G	800	1.2	1.0	0.0025	50				
1N5622	S			G	1000	1.2	1.0	0.0025	50				
1N5623	S			G	1000	1.2	1.0	0.0025	50				
1N5624	S	MR502	MR501	G	200	0.95	3.0	0.3	125				
1N5625	S	MR504	MR501	G	400	0.95	3.0	0.3	125				
1N5626	S	MR506	MR501	G	600	0.95	3.0	0.3	125				
1N5627	S	MR508	MR501	G	800	0.95	3.0	0.3	125				
1N5629,A			Table 2	P									
thru													
1N5665,A			Table 2	P									
1N5666A	S			Z						1.8	1.0	10	250m
1N5667A	S			Z						2.0	1.0	10	250m
1N5668A	S			Z						2.2	1.0	10	250m
1N5669A	S			Z						2.4	1.0	10	250m
1N5670A	S			Z						2.7	1.0	10	250m
1N5671A	S			Z						3.0	1.0	10	250m
1N5672A	S			Z						3.3	1.0	10	250m
1N5673A	S			Z						3.6	1.0	10	250m
1N5674A	S			Z						3.9	1.0	10	250m
1N5675A	S			Z						4.3	1.0	10	250m
1N5676A	S			Z						4.7	1.0	10	250m
1N5677A	S			Z						5.1	1.0	10	250m
1N5678A	S			Z						5.6	1.0	10	250m
1N5679	S			G	50	1.1	1.0	0.01	50				
1N5680	S			G	100	1.1	1.0	0.01	50				
1N5711				J									
thru													
1N5713													
1N5720	S			S	30	1.0	50m	500n	0.01				
1N5721	S			S	15	1.0	50m	500n	0.01				
1N5726	S			S	60	1.1	500m	200n	0.01				
1N5727	S			S	50	1.1	500m	100n	0.01				
1N5728B	S			Z						4.7	10	5.0	400m
1N5729B	S			Z						5.1	10	5.0	400m
1N5730B	S			Z						5.6	10	5.0	400m
1N5731B	S			Z						6.2	10	5.0	400m
1N5732B	S			Z						6.8	10	5.0	400m
1N5733B	S			Z						7.5	10	5.0	400m
1N5734B	S			Z						8.2	10	5.0	400m
1N5735B	S			Z						9.1	10	5.0	400m
1N5736B	S			Z						10	10	5.0	400m
1N5737B	S			Z						11	5.0	5.0	400m
1N5738B	S			Z						12	5.0	5.0	400m
1N5739B	S			Z						13	5.0	5.0	400m
1N5740B	S			Z						15	5.0	5.0	400m
1N5741B	S			Z						16	5.0	5.0	400m
1N5742B	S			Z						18	5.0	5.0	400m
1N5743B	S			Z						20	5.0	5.0	400m
1N5744B	S			Z						22	5.0	5.0	400m
1N5745B	S			Z						24	5.0	5.0	400m
1N5746B	S			Z						27	2.0	5.0	400m

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS: V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES: V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES: PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES: V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N5747B	S			Z						30	2.0	5.0	400m
1N5748B	S			Z						33	2.0	5.0	400m
1N5749B	S			Z						36	2.0	5.0	400m
1N5750B	S			Z						39	2.0	5.0	400m
1N5751B	S			Z						43	2.0	5.0	400m
1N5752B	S			Z						47	2.0	5.0	400m
1N5753B	S			Z						51	2.0	5.0	400m
1N5754B	S			Z						56	2.0	5.0	400m
1N5755B	S			Z						62	2.0	5.0	400m
1N5756B	S			Z						68	2.0	5.0	400m
1N5757B	S			Z						75	2.0	5.0	400m
1N5758 thru 1N5762A			Table 6	3									
1N5763	S			G	33	1.2	300	10	4500				
1N5764			Table 4	M									
1N5765			Table 5	E									
1N5766	S			S	110	1.75	30	2.0*	400n				
1N5767	S			S		1.0	100m	1.0*					
1N5768 thru 1N5775				A									
1N5779 thru 1N5793			Table 6	4									
1N5794	S	1N4001	1N4001	G	50	1.0	1.0	30					
1N5795	S	1N4002	1N4001	G	100	1.0	1.0	30					
1N5796	S	1N4003	1N4001	G	200	1.0	1.0	30					
1N5797	S	1N4004	1N4001	G	400	1.0	1.0	30					
1N5798	S	1N4005	1N4001	G	600	1.0	1.0	30					
1N5799	S	1N4006	1N4001	G	800	1.0	1.0	30					
1N5800	S	1N4007	1N4001	G	1000	1.0	1.0	30					
1N5801				E									
1N5802	S	MR850	MR850	G	50	0.8	2.5	2.0	35				
1N5803	S	MR851	MR850	G	75	0.8	2.5	2.0	35				
1N5804	S	MR851	MR850	G	100	0.8	2.5	2.0	35				
1N5805	S	MR852	MR850	G	125	0.8	2.5	2.0	35				
1N5806	S	MR852	MR850	G	150	0.8	2.5	2.0	35				
1N5807	S	MR850	MR820	G	50	0.7	6.0	3.0	125				
1N5808	S	MR821	MR820	G	75	0.7	6.0	3.0	125				
1N5809	S	MR821	MR820	G	100	0.7	6.0	3.0	125				
1N5810	S	MR822	MR820	G	125	0.7	6.0	3.0	125				
1N5811	S	MR822	MR820	G	150	0.7	6.0	3.0	125				
1N5812	S	1N3899	1N3899	G	50	0.85	20	10	250				
1N5813	S	1N3900	1N3899	G	75	0.85	20	10	250				
1N5814	S	1N3900	1N3899	G	100	0.85	20	10	250				
1N5815	S	1N3901	1N3899	G	125	0.85	20	10	250				
1N5816	S	1N3901	1N3899	G	150	0.85	20	10	250				
★1N5817	S		1N5817	H	20	0.45	1.0	1.0	100				
★1N5818	S			H	30	0.55	1.0	1.0	100				
★1N5819	S			H	40	0.60	1.0	1.0	100				
★1N5820	S		1N5820	H	20	0.475	3.0	2.0	250				
★1N5821	S		1N5820	H	30	0.500	3.0	2.0	250				
★1N5822	S		1N5820	H	40	0.525	3.0	2.0	250				
★1N5823	S		1N5823	H	20	0.47	5.0	10	500				
★1N5824	S		1N5823	H	30	0.49	5.0	10	500				
★1N5825	S		1N5823	H	40	0.52	5.0	10	500				
★1N5826	S		1N5826	H	20	0.67	15	10	500				
★1N5827	S		1N5826	H	30	0.77	15	10	500				
★1N5828	S		1N5826	H	40	0.87	15	10	500				
★1N5829	S		1N5829	H	20	0.72	25	20	800				
★1N5830	S		1N5829	H	30	0.77	25	20	800				
★1N5831	S		1N5829	H	40	0.82	25	20	800				
★1N5832	S		1N5832	H	20	0.98	40	20	800				
★1N5833	S		1N5832	H	30	1.08	40	20	800				
★1N5834	S		1N5832	H	40	1.18	40	20	800				
1N5835				F	30	0.9	3.0	0.001	150				
1N5836				F	50	0.9	3.0	0.001	150				
1N5837A	S			Z						2.4	20	10	500m
1N5837B	S			Z						2.4	20	5.0	500m

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N5838A	S			Z						2.5	20	10	500m
1N5838B	S			Z						2.5	20	5.0	500m
1N5839A	S			Z						2.7	20	10	500m
1N5839B	S			Z						2.7	20	5.0	500m
1N5840A	S			Z						2.8	20	10	500m
1N5840B	S			Z						2.8	20	5.0	500m
1N5841A	S			Z						3.0	20	10	500m
1N5841B	S			Z						3.0	20	5.0	500m
1N5842A	S			Z						3.3	20	10	500m
1N5842B	S			Z						3.3	20	5.0	500m
1N5843A	S			Z						3.6	20	10	500m
1N5843B	S			Z						3.6	20	5.0	500m
1N5844A	S			Z						3.9	20	10	500m
1N5844B	S			Z						3.9	20	5.0	500m
1N5845A	S			Z						4.3	20	10	500m
1N5845B	S			Z						4.3	20	5.0	500m
1N5846A	S			Z						4.7	20	10	500m
1N5846B	S			Z						4.7	20	5.0	500m
1N5847A	S			Z						5.1	20	10	500m
1N5847B	S			Z						5.1	20	5.0	500m
1N5848A	S			Z						5.6	20	10	500m
1N5848B	S			Z						5.6	20	5.0	500m
1N5849A	S			Z						6.0	20	10	500m
1N5849B	S			Z						6.0	20	5.0	500m
1N5850A	S			Z						6.2	20	10	500m
1N5850B	S			Z						6.2	20	5.0	500m
1N5851A	S			Z						6.8	20	10	500m
1N5851B	S			Z						6.8	20	5.0	500m
1N5852A	S			Z						7.5	20	10	500m
1N5852B	S			Z						7.5	20	5.0	500m
1N5853A	S			Z						8.2	20	10	500m
1N5853B	S			Z						8.2	20	5.0	500m
1N5854A	S			Z						8.7	20	10	500m
1N5854B	S			Z						8.7	20	5.0	500m
1N5855A	S			Z						9.1	20	10	500m
1N5855B	S			Z						9.1	20	5.0	500m
1N5856A	S			Z						10	20	10	500m
1N5856B	S			Z						10	20	5.0	500m
1N5857A	S			Z						11	20	10	500m
1N5857B	S			Z						11	20	5.0	500m
1N5858A	S			Z						12	20	10	500m
1N5858B	S			Z						12	20	5.0	500m
1N5859A	S			Z						13	9.5	10	500m
1N5859B	S			Z						13	9.5	5.0	500m
1N5860A	S			Z						14	9.0	10	500m
1N5860B	S			Z						14	9.0	5.0	500m
1N5861A	S			Z						15	8.5	10	500m
1N5861B	S			Z						15	8.5	5.0	500m
1N5862A	S			Z						16	7.8	10	500m
1N5862B	S			Z						16	7.8	5.0	500m
1N5863A	S			Z						17	7.4	10	500m
1N5863B	S			Z						17	7.4	5.0	500m
1N5864A	S			Z						18	7.0	10	500m
1N5864B	S			Z						18	7.0	5.0	500m
1N5865A	S			Z						19	6.6	10	500m
1N5865B	S			Z						19	6.6	5.0	500m
1N5866A	S			Z						20	6.2	10	500m
1N5866B	S			Z						20	6.2	5.0	500m
1N5867A	S			Z						22	5.6	10	500m
1N5867B	S			Z						22	5.6	5.0	500m
1N5868A	S			Z						24	5.2	10	500m
1N5868B	S			Z						24	5.2	5.0	500m
1N5869A	S			Z						25	5.0	10	500m
1N5869B	S			Z						25	5.0	5.0	500m
1N5870A	S			Z						27	4.6	10	500m
1N5870B	S			Z						27	4.6	5.0	500m
1N5871A	S			Z						28	4.5	10	500m
1N5871B	S			Z						28	4.5	5.0	500m
1N5872A	S			Z						30	4.2	10	500m
1N5872B	S			Z						30	4.2	5.0	500m

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
1N5873A	S			Z						33	3.8	10	500m
1N5873B	S			Z						33	3.8	5.0	500m
1N5874A	S			Z						36	3.4	10	500m
1N5874B	S			Z						36	3.4	5.0	500m
1N5875A	S			Z						39	3.2	10	500m
1N5875B	S			Z						39	3.2	5.0	500m
1N5876A	S			Z						43	3.0	10	500m
1N5876B	S			Z						43	3.0	5.0	500m
1N5877A	S			Z						47	2.7	10	500m
1N5877B	S			Z						47	2.7	5.0	500m
1N5878A	S			Z						51	2.5	10	500m
1N5878B	S			Z						51	2.5	5.0	500m
1N5879A	S			Z						56	2.2	10	500m
1N5879B	S			Z						56	2.2	5.0	500m
1N5880A	S			Z						60	2.1	10	500m
1N5880B	S			Z						60	2.1	5.0	500m
1N5881A	S			Z						62	2.0	10	500m
1N5881B	S			Z						62	2.0	5.0	500m
1N5882A	S			Z						68	1.8	10	500m
1N5882B	S			Z						68	1.8	5.0	500m
1N5883A	S			Z						75	1.7	10	500m
1N5883B	S			Z						75	1.7	5.0	500m
1N5884A	S			Z						82	1.5	10	500m
1N5884B	S			Z						82	1.5	5.0	500m
1N5885A	S			Z						87	1.4	10	500m
1N5885B	S			Z						87	1.4	5.0	500m
1N5886A	S			Z						91	1.4	10	500m
1N5886B	S			Z						91	1.4	5.0	500m
1N5887A	S			Z						100	1.3	10	500m
1N5887B	S			Z						100	1.3	5.0	500m
1N5888A	S			Z						110	1.1	10	500m
1N5888B	S			Z						110	1.1	5.0	500m
1N5889A	S			Z						120	1.0	10	500m
1N5889B	S			Z						120	1.0	5.0	500m
1N5890A	S			Z						130	0.95	10	500m
1N5890B	S			Z						130	0.95	5.0	500m
1N5891A	S			Z						140	0.90	10	500m
1N5891B	S			Z						140	0.90	5.0	500m
1N5892A	S			Z						150	0.85	10	500m
1N5892B	S			Z						150	0.85	5.0	500m
1N5893A	S			Z						160	0.80	10	500m
1N5893B	S			Z						160	0.80	5.0	500m
1N5894A	S			Z						170	0.74	10	500m
1N5894B	S			Z						170	0.74	5.0	500m
1N5895A	S			Z						180	0.68	10	500m
1N5895B	S			Z						180	0.68	5.0	500m
1N5896A	S			Z						190	0.66	10	500m
1N5896B	S			Z						190	0.66	5.0	500m
1N5897A	S			Z						200	0.65	10	500m
1N5897B	S			Z						200	0.65	5.0	500m
1N5898	S			G	50	1.0	3.0	5.0	300				
1N5899	S			G	100	1.0	3.0	5.0	300				
1N5900	S			G	200	1.0	3.0	5.0	300				
1N5901	S			G	400	1.0	3.0	5.0	300				
1N5902	S			G	600	1.0	3.0	5.0	300				
1N5903	S			G	800	1.0	3.0	5.0	300				
1N5904	S			G	1000	1.0	3.0	5.0	300				
1N5905	S			G	1200	1.0	3.0	5.0	300				
1N5906			Table 4	M									
1N5907			Table 2	P									
1N5908			Table 2	P									
1N5909			Table 5	E									
1N5910			Table 5	E									
1N5911			Table 5	E									
1N5912			Table 5	E									
★1N5913	S		1N5913	Z						3.3	20		1.5W
★1N5913A	S		1N5913	Z						3.3	10		1.5W
★1N5913B	S		1N5913	Z						3.3	5.0		1.5W
★1N5913C	S		1N5913	Z						3.3	2.0		1.5W
★1N5913D	S		1N5913	Z						3.3	1.0		1.5W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N5914	S		1N5913	Z						3.6	20		1.5W
★1N5914A	S		1N5913	Z						3.6	10		1.5W
★1N5914B	S		1N5913	Z						3.6	5		1.5W
★1N5914C	S		1N5913	Z						3.6	2		1.5W
★1N5914D	S		1N5913	Z						3.6	1		1.5W
★1N5915	S		1N5913	Z						3.9	20		1.5W
★1N5915A	S		1N5913	Z						3.9	10		1.5W
★1N5915B	S		1N5913	Z						3.9	5		1.5W
★1N5915C	S		1N5913	Z						3.9	2.0		1.5W
★1N5915D	S		1N5913	Z						3.9	1.0		1.5W
★1N5916	S		1N5913	Z						4.3	20		1.5W
★1N5916A	S		1N5913	Z						4.3	10		1.5W
★1N5916B	S		1N5913	Z						4.3	5.0		1.5W
★1N5916C	S		1N5913	Z						4.3	2.0		1.5W
★1N5916D	S		1N5913	Z						4.3	1.0		1.5W
★1N5917	S		1N5913	Z						4.7	20		1.5W
★1N5917A	S		1N5913	Z						4.7	10		1.5W
★1N5917B	S		1N5913	Z						4.7	5.0		1.5W
★1N5917C	S		1N5913	Z						4.7	2.0		1.5W
★1N5917D	S		1N5913	Z						4.7	1.0		1.5W
★1N5918	S		1N5913	Z						5.1	20		1.5W
★1N5918A	S		1N5913	Z						5.1	10		1.5W
★1N5918B	S		1N5913	Z						5.1	5.0		1.5W
★1N5918C	S		1N5913	Z						5.1	2.0		1.5W
★1N5918D	S		1N5913	Z						5.1	1.0		1.5W
★1N5919	S		1N5913	Z						5.6	20		1.5W
★1N5919A	S		1N5913	Z						5.6	10		1.5W
★1N5919B	S		1N5913	Z						5.6	5.0		1.5W
★1N5919C	S		1N5913	Z						5.6	2.0		1.5W
★1N5919D	S		1N5913	Z						5.6	1.0		1.5W
★1N5920	S		1N5913	Z						6.2	20		1.5W
★1N5920A	S		1N5913	Z						6.2	10		1.5W
★1N5920B	S		1N5913	Z						6.2	5.0		1.5W
★1N5920C	S		1N5913	Z						6.2	2.0		1.5W
★1N5920D	S		1N5913	Z						6.2	1.0		1.5W
★1N5921	S		1N5913	Z						6.8	20		1.5W
★1N5921A	S		1N5913	Z						6.8	10		1.5W
★1N5921B	S		1N5913	Z						6.8	5.0		1.5W
★1N5921C	S		1N5913	Z						6.8	2.0		1.5W
★1N5921D	S		1N5913	Z						6.8	1.0		1.5W
★1N5922	S		1N5913	Z						7.5	20		1.5W
★1N5922A	S		1N5913	Z						7.5	10		1.5W
★1N5922B	S		1N5913	Z						7.5	5.0		1.5W
★1N5922C	S		1N5913	Z						7.5	2.0		1.5W
★1N5922D	S		1N5913	Z						7.5	1.0		1.5W
★1N5923	S		1N5913	Z						8.2	20		1.5W
★1N5923A	S		1N5913	Z						8.2	10		1.5W
★1N5923B	S		1N5913	Z						8.2	5.0		1.5W
★1N5923C	S		1N5913	Z						8.2	2.0		1.5W
★1N5923D	S		1N5913	Z						8.2	1.0		1.5W
★1N5924	S		1N5913	Z						9.1	20		1.5W
★1N5924A	S		1N5913	Z						9.1	10		1.5W
★1N5924B	S		1N5913	Z						9.1	5.0		1.5W
★1N5924C	S		1N5913	Z						9.1	2.0		1.5W
★1N5924D	S		1N5913	Z						9.1	1.0		1.5W
★1N5925	S		1N5913	Z						10	20		1.5W
★1N5925A	S		1N5913	Z						10	10		1.5W
★1N5925B	S		1N5913	Z						10	5.0		1.5W
★1N5925C	S		1N5913	Z						10	2.0		1.5W
★1N5925D	S		1N5913	Z						10	1.0		1.5W
★1N5926	S		1N5913	Z						11	20		1.5W
★1N5926A	S		1N5913	Z						11	10		1.5W
★1N5926B	S		1N5913	Z						11	5.0		1.5W
★1N5926C	S		1N5913	Z						11	2.0		1.5W
★1N5926D	S		1N5913	Z						11	1.0		1.5W
★1N5927	S		1N5913	Z						12	20		1.5W
★1N5927A	S		1N5913	Z						12	10		1.5W
★1N5927B	S		1N5913	Z						12	5.0		1.5W
★1N5927C	S		1N5913	Z						12	2.0		1.5W
★1N5927D	S		1N5913	Z						12	1.0		1.5W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N5928	S		1N5913	Z						13	20		1.5W
★1N5928A	S		1N5913	Z						13	10		1.5W
★1N5928B	S		1N5913	Z						13	5.0		1.5W
★1N5928C	S		1N5913	Z						13	2.0		1.5W
★1N5928D	S		1N5913	Z						13	1.0		1.5W
★1N5929	S		1N5913	Z						15	20		1.5W
★1N5929A	S		1N5913	Z						15	10		1.5W
★1N5929B	S		1N5913	Z						15	5.0		1.5W
★1N5929C	S		1N5913	Z						15	2.0		1.5W
★1N5929D	S		1N5913	Z						15	1.0		1.5W
★1N5930	S		1N5913	Z						16	20		1.5W
★1N5930A	S		1N5913	Z						16	10		1.5W
★1N5930B	S		1N5913	Z						16	5.0		1.5W
★1N5930C	S		1N5913	Z						16	2.0		1.5W
★1N5930D	S		1N5913	Z						16	1.0		1.5W
★1N5931	S		1N5913	Z						18	20		1.5W
★1N5931A	S		1N5913	Z						18	10		1.5W
★1N5931B	S		1N5913	Z						18	5.0		1.5W
★1N5931C	S		1N5913	Z						18	2.0		1.5W
★1N5931D	S		1N5913	Z						18	1.0		1.5W
★1N5932	S		1N5913	Z						20	20		1.5W
★1N5932A	S		1N5913	Z						20	10		1.5W
★1N5932B	S		1N5913	Z						20	5.0		1.5W
★1N5932C	S		1N5913	Z						20	2.0		1.5W
★1N5932D	S		1N5913	Z						20	1.0		1.5W
★1N5933	S		1N5913	Z						22	20		1.5W
★1N5933A	S		1N5913	Z						22	10		1.5W
★1N5933B	S		1N5913	Z						22	5.0		1.5W
★1N5933C	S		1N5913	Z						22	2.0		1.5W
★1N5933D	S		1N5913	Z						22	1.0		1.5W
★1N5934	S		1N5913	Z						24	20		1.5W
★1N5934A	S		1N5913	Z						24	10		1.5W
★1N5934B	S		1N5913	Z						24	5.0		1.5W
★1N5934C	S		1N5913	Z						24	2.0		1.5W
★1N5934D	S		1N5913	Z						24	1.0		1.5W
★1N5935	S		1N5913	Z						27	20		1.5W
★1N5935A	S		1N5913	Z						27	10		1.5W
★1N5935B	S		1N5913	Z						27	5.0		1.5W
★1N5935C	S		1N5913	Z						27	2.0		1.5W
★1N5935D	S		1N5913	Z						27	1.0		1.5W
★1N5936	S		1N5913	Z						30	20		1.5W
★1N5936A	S		1N5913	Z						30	10		1.5W
★1N5936B	S		1N5913	Z						30	5.0		1.5W
★1N5936C	S		1N5913	Z						30	2.0		1.5W
★1N5936D	S		1N5913	Z						30	1.0		1.5W
★1N5937	S		1N5913	Z						33	20		1.5W
★1N5937A	S		1N5913	Z						33	10		1.5W
★1N5937B	S		1N5913	Z						33	5.0		1.5W
★1N5937C	S		1N5913	Z						33	2.0		1.5W
★1N5937D	S		1N5913	Z						33	1.0		1.5W
★1N5938	S		1N5913	Z						36	20		1.5W
★1N5938A	S		1N5913	Z						36	10		1.5W
★1N5938B	S		1N5913	Z						36	5.0		1.5W
★1N5938C	S		1N5913	Z						36	2.0		1.5W
★1N5938D	S		1N5913	Z						36	1.0		1.5W
★1N5939	S		1N5913	Z						39	20		1.5W
★1N5939A	S		1N5913	Z						39	10		1.5W
★1N5939B	S		1N5913	Z						39	5.0		1.5W
★1N5939C	S		1N5913	Z						39	2.0		1.5W
★1N5939D	S		1N5913	Z						39	1.0		1.5W
★1N5940	S		1N5913	Z						43	20		1.5W
★1N5940A	S		1N5913	Z						43	10		1.5W
★1N5940B	S		1N5913	Z						43	5.0		1.5W
★1N5940C	S		1N5913	Z						43	2.0		1.5W
★1N5940D	S		1N5913	Z						43	1.0		1.5W
★1N5941	S		1N5913	Z						47	20		1.5W
★1N5941A	S		1N5913	Z						47	10		1.5W
★1N5941B	S		1N5913	Z						47	5.0		1.5W
★1N5941C	S		1N5913	Z						47	2.0		1.5W
★1N5941D	S		1N5913	Z						47	1.0		1.5W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N5942	S		1N5913	Z						51	20		1.5W
★1N5942A	S		1N5913	Z						51	10		1.5W
★1N5942B	S		1N5913	Z						51	5.0		1.5W
★1N5942C	S		1N5913	Z						51	2.0		1.5W
★1N5942D	S		1N5913	Z						51	1.0		1.5W
★1N5943	S		1N5913	Z						56	20		1.5W
★1N5943A	S		1N5913	Z						56	10		1.5W
★1N5943B	S		1N5913	Z						56	5.0		1.5W
★1N5943C	S		1N5913	Z						56	2.0		1.5W
★1N5943D	S		1N5913	Z						56	1.0		1.5W
★1N5944	S		1N5913	Z						62	20		1.5W
★1N5944A	S		1N5913	Z						62	10		1.5W
★1N5944B	S		1N5913	Z						62	5.0		1.5W
★1N5944C	S		1N5913	Z						62	2.0		1.5W
★1N5944D	S		1N5913	Z						62	1.0		1.5W
★1N5945	S		1N5913	Z						68	20		1.5W
★1N5945A	S		1N5913	Z						68	10		1.5W
★1N5945B	S		1N5913	Z						68	5.0		1.5W
★1N5945C	S		1N5913	Z						68	2.0		1.5W
★1N5945D	S		1N5913	Z						68	1.0		1.5W
★1N5946	S		1N5913	Z						75	20		1.5W
★1N5946A	S		1N5913	Z						75	10		1.5W
★1N5946B	S		1N5913	Z						75	5.0		1.5W
★1N5946C	S		1N5913	Z						75	2.0		1.5W
★1N5946D	S		1N5913	Z						75	1.0		1.5W
★1N5947	S		1N5913	Z						82	20		1.5W
★1N5947A	S		1N5913	Z						82	10		1.5W
★1N5947B	S		1N5913	Z						82	5.0		1.5W
★1N5947C	S		1N5913	Z						82	2.0		1.5W
★1N5947D	S		1N5913	Z						82	1.0		1.5W
★1N5948	S		1N5913	Z						91	20		1.5W
★1N5948A	S		1N5913	Z						91	10		1.5W
★1N5948B	S		1N5913	Z						91	5.0		1.5W
★1N5948C	S		1N5913	Z						91	2.0		1.5W
★1N5948D	S		1N5913	Z						91	1.0		1.5W
★1N5949	S		1N5913	Z						100	20		1.5W
★1N5949A	S		1N5913	Z						100	10		1.5W
★1N5949B	S		1N5913	Z						100	5.0		1.5W
★1N5949C	S		1N5913	Z						100	2.0		1.5W
★1N5949D	S		1N5913	Z						100	1.0		1.5W
★1N5950	S		1N5913	Z						110	20		1.5W
★1N5950A	S		1N5913	Z						110	10		1.5W
★1N5950B	S		1N5913	Z						110	5.0		1.5W
★1N5950C	S		1N5913	Z						110	2.0		1.5W
★1N5950D	S		1N5913	Z						110	1.0		1.5W
★1N5951	S		1N5913	Z						120	20		1.5W
★1N5951A	S		1N5913	Z						120	10		1.5W
★1N5951B	S		1N5913	Z						120	5.0		1.5W
★1N5951C	S		1N5913	Z						120	2.0		1.5W
★1N5951D	S		1N5913	Z						120	1.0		1.5W
★1N5952	S		1N5913	Z						130	20		1.5W
★1N5952A	S		1N5913	Z						130	10		1.5W
★1N5952B	S		1N5913	Z						130	5.0		1.5W
★1N5952C	S		1N5913	Z						130	2.0		1.5W
★1N5952D	S		1N5913	Z						130	1.0		1.5W
★1N5953	S		1N5913	Z						150	20		1.5W
★1N5953A	S		1N5913	Z						150	10		1.5W
★1N5953B	S		1N5913	Z						150	5.0		1.5W
★1N5953C	S		1N5913	Z						150	2.0		1.5W
★1N5953D	S		1N5913	Z						150	1.0		1.5W
★1N5954	S		1N5913	Z						160	20		1.5W
★1N5954A	S		1N5913	Z						160	10		1.5W
★1N5954B	S		1N5913	Z						160	5.0		1.5W
★1N5954C	S		1N5913	Z						160	2.0		1.5W
★1N5954D	S		1N5913	Z						160	1.0		1.5W
★1N5955	S		1N5913	Z						180	20		1.5W
★1N5955A	S		1N5913	Z						180	10		1.5W
★1N5955B	S		1N5913	Z						180	5.0		1.5W
★1N5955C	S		1N5913	Z						180	2.0		1.5W
★1N5955D	S		1N5913	Z						180	1.0		1.5W

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★1N5956	S		1N5913	Z						200	20		1.5W
★1N5956A	S		1N5913	Z						200	10		1.5W
★1N5956B	S		1N5913	Z						200	5.0		1.5W
★1N5956C	S		1N5913	Z						200	2.0		1.5W
★1N5956D	S		1N5913	Z						200	1.0		1.5W
1N5957	S		Table 4	S									

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	ZENER DIODES V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES PRV Volts	V_F Volts @ I_F		I_R	t_{rr} μs	REFERENCE DIODES V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★3N39				Q						9.0	0.005	5.0	-/71
★3N40				Q						9.0	0.003	5.0	-/71
★3N41				Q						9.0	0.002	5.0	-/71
★3N42				Q						9.0	0.005	5.0	-/100
★3N43				Q						9.0	0.003	5.0	-/100
★3N44				Q						9.0	0.002	5.0	-/100
★3N44A				Q						9.0	0.001	5.0	-/150
★MBR320M	S		MBR320M	H	20		15	10	500				
★MBR330M	S		MBR320M	H	30		15	10	500				
★MBR340M	S		MBR320M	H	40		15	10	500				
★MBR1520	S		MBR1520	H	20		5	10	500				
★MBR1530	S		MBR1520	H	30		5	10	500				
★MBR1540	S		MBR1520	H	40		5	10	500				
★MBR2520	S		MBR2520	H	20		25	20	800				
★MBR2530	S		MBR2520	H	30		25	20	800				
★MBR2540	S		MBR2540	H	40		25	20	800				
★MBR4020	S		MBR4020	H	20		40	20	800				
★MBR4020PF	S		MBR4020PF	H	20	0.63	40	20	800				
★MBR4030	S		MBR4020	H	30		40	20	800				
★MBR4030PF	S		MBR4020PF	H	30	0.63	40	20	800				
★MBR4040	S		MBR4020	H	40		40	20	800				
★MCA1911				Q						6.8	0.051	5.0	0/75
★MCA1912				Q						6.8	0.025	5.0	0/75
★MCA1913				Q						6.8	0.010	5.0	0/75
★MCA1914				Q						6.8	0.005	5.0	0/75
★MCA1921				Q						6.8	0.105	5.0	-55/100
★MCA1922				Q						6.8	0.052	5.0	-55/100
★MCA1923				Q						6.8	0.020	5.0	-55/100
★MCA1924				Q						6.8	0.010	5.0	-55/100
★MCA1931				Q						6.8	0.139	5.0	-55/150
★MCA1932				Q						6.8	0.069	5.0	-55/150
★MCA1933				Q						6.8	0.026	5.0	-55/150
★MCA1934				Q						6.8	0.013	5.0	-55/150
★MCA2011				Q						8.6	0.060	5.0	0/75
★MCA2012				Q						8.6	0.030	5.0	0/75
★MCA2013				Q						8.6	0.012	5.0	0/75
★MCA2014				Q						8.6	0.006	5.0	0/75
★MCA2021				Q						8.6	0.124	5.0	-55/100
★MCA2022				Q						8.6	0.062	5.0	-55/100
★MCA2023				Q						8.6	0.024	5.0	-55/100
★MCA2024				Q						8.6	0.012	5.0	-55/100
★MCA2031				Q						8.6	0.164	5.0	-55/150
★MCA2032				Q						8.6	0.082	5.0	-55/150
★MCA2033				Q						8.6	0.032	5.0	-55/150
★MCA2034				Q						8.6	0.016	5.0	-55/150
★MCA2111				Q						9.5	0.071	5.0	0/75
★MCA2112				Q						9.5	0.035	5.0	0/75
★MCA2113				Q						9.5	0.014	5.0	0/75
★MCA2114				Q						9.5	0.007	5.0	0/75
★MCA2121				Q						9.5	0.147	5.0	-55/100
★MCA2122				Q						9.5	0.073	5.0	-55/100
★MCA2123				Q						9.5	0.028	5.0	-55/100
★MCA2124				Q						9.5	0.014	5.0	-55/100
★MCA2131				Q						9.5	0.194	5.0	-55/150
★MCA2132				Q						9.5	0.097	5.0	-55/150
★MCA2133				Q						9.5	0.038	5.0	-55/150
★MCA2134				Q						9.5	0.019	5.0	-55/150
★MCA2211				Q						11.0	0.082	5.0	0/75
★MCA2212				Q						11.0	0.041	5.0	0/75
★MCA2213				Q						11.0	0.016	5.0	0/75
★MCA2214				Q						11.0	0.008	5.0	0/75
★MCA2221				Q						11.0	0.170	5.0	-55/100
★MCA2222				Q						11.0	0.085	5.0	-55/100
★MCA2223				Q						11.0	0.034	5.0	-55/100
★MCA2224				Q						11.0	0.017	5.0	-55/100
★MCA2231				Q						11.0	0.225	5.0	-55/150
★MCA2232				Q						11.0	0.112	5.0	-55/150
★MCA2233				Q						11.0	0.044	5.0	-55/150
★MCA2234				Q						11.0	0.022	5.0	-55/150
★MCLTC6010	S		MCLTC6010	R						6.4	0.01	†	-55/100

† Built-in FET Current Source.

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★MCLTC6025	S		MCLTC6010	R						6.4	0.025	†	-55/100
★MCLTC6050	S		MCLTC6010	R						6.4	0.05	†	-55/100
★MCLTC6100	S		MCLTC6010	R						6.4	0.1	†	-55/100
★MDA60-1	S		MDA960	A	50		2.5		100				
★MDA60-2	S		MDA960	A	100								
★MDA60-3	S		MDA960	A	200								
★MDA62-1	S		MDA960	A	50		1.0		250				
★MDA62-2	S		MDA942	A	100		1.0		250				
★MDA62-3	S		MDA942	A	200		1.0		250				
★MDA62-4	S		MDA942	A	300		1.0		250				
★MDA62-5	S		MDA942	A	400		1.0		250				
★MDA100	S			A	50	1.05	1.5	0.01	45				
★MDA101	S			A	100	1.05	1.5	0.01	45				
★MDA102	S			A	200	1.05	1.5	0.01	45				
★MDA104	S			A	400	1.05	1.5	0.01	45				
★MDA106	S			A	600	1.05	1.5	0.01	45				
★MDA108	S			A	800	1.05	1.5	0.01	45				
★MDA110	S			A	1000	1.05	1.5	0.01	45				
★MDA920-1	S		MDA920	A	25		1.0		32				
★MDA920-2	S		MDA920	A	50		1.0						
★MDA920-3	S		MDA920	A	100		1.0		32				
★MDA920-4	S		MDA920	A	200		1.0		32				
★MDA920-5	S		MDA920	A	300		1.0		32				
★MDA920-6	S		MDA920	A	400		1.0		32				
★MDA920-7	S		MDA920	A	600		1.0		32				
★MDA922-1	S		MDA922-1	A	25		1.8		60				
★MDA922-2	S		MDA922-1	A	50		1.8		60				
★MDA922-3	S		MDA922-1	A	100		1.8		60				
★MDA922-4	S		MDA922-1	A	200		1.8		60				
★MDA922-5	S		MDA922-1	A	300		1.8		60				
★MDA922-6	S		MDA922-1	A	400		1.8		60				
★MDA922-7	S		MDA922-1	A	600		1.8		60				
★MDA922-8	S		MDA922-1	A	800		1.8		60				
★MDA922-9	S		MDA922-1	A	1000		1.8		60				
★MDA930-1	S		MDA920	A	25		0.5		32				
★MDA930-2	S		MDA920	A	50		0.5		32				
★MDA930-3	S		MDA920	A	100		0.5		32				
★MDA930-4	S		MDA920	A	200		0.5		32				
★MDA930-5	S		MDA920	A	300		0.5		32				
★MDA930-6	S		MDA920	A	400		0.5		32				
★MDA930-7	S		MDA920	A	600		0.5		32				
★MDA940-1	S		MDA920	A	25		1.0		32				
★MDA940-2	S		MDA920	A	50		1.0		32				
★MDA940-3	S		MDA920	A	100		1.0		32				
★MDA940-4	S		MDA920	A	200		1.0		32				
★MDA940-5	S		MDA920	A	300		1.0		32				
★MDA940-6	S		MDA920	A	400		1.0		32				
★MDA940-7	S		MDA920	A	600		1.0		32				
★MDA942-1	S		MDA942	A	50		1.5		25				
★MDA942-2	S		MDA942	A	100		1.5		25				
★MDA942-3	S		MDA942	A	200		1.5		25				
★MDA942-4	S		MDA942	A	300		1.5		25				
★MDA942-5	S		MDA942	A	400		1.5		25				
★MDA942-6	S		MDA942	A	600		1.5		25				
★MDA950-1	S		MDA920	A	25		1.0		32				
★MDA950-2	S		MDA920	A	50		1.0		32				
★MDA950-3	S		MDA920	A	100		1.0		32				
★MDA950-4	S		MDA920	A	200		1.0		32				
★MDA950-5	S		MDA920	A	300		1.0		32				
★MDA950-6	S		MDA920	A	400		1.0		32				
★MDA950-7	S		MDA920	A	600		1.0		32				
★MDA952-1	S		MDA942	A	50		6.0		150				
★MDA952-2	S		MDA942	A	100		6.0		150				
★MDA952-3	S		MDA942	A	200		6.0		150				
★MDA952-4	S		MDA942	A	300		6.0		150				
★MDA952-5	S		MDA942	A	400		6.0		150				
★MDA952-6	S		MDA942	A	600		6.0		150				
★MDA952FR-1	S		MDA952FR-1	A	50		6.0		150				
★MDA952FR-2	S		MDA952FR-1	A	100		6.0		150				
★MDA952FR-3	S		MDA952FR-1	A	200		6.0		150				

† Built-in FET Current Source.

TYPE NO.	MATERIAL	REPLACEMENT	REFERENCE	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_{RWM} Volts	V_F Volts	I_O Amp	I_R mA	I_{FSM} Amp	V_Z Nom Volts	I_{ZT} mA	Tol V_Z ±%	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV Volts	V_F Volts @	I_F	I_R	t_{rr} μs	V_Z Nom Volts	T_C %/°C	I_{ZT} mA	Temp Range °C
★MDA952FR-4	S		MDA952FR-1	A	300		6.0		150				
★MDA952FR-5	S		MDA952FR-1	A	400		6.0		150				
★MDA970-1	S		MDA960	A	50		4.0		150				
★MDA970-2	S		MDA960	A	100		4.0		150				
★MDA970-3	S		MDA960	A	200		4.0		150				
★MDA972-1	S		MDA942	A	35		16		250				
★MDA972-2	S		MDA942	A	70		16		250				
★MDA972-3	S		MDA942	A	140		16		250				
★MDA972-4	S		MDA942	A	210		16		250				
★MDA972-5	S		MDA942	A	280		16		250				
★MDA980-1	S		MDA980-1	A	50		12		300				
★MDA980-2	S		MDA980-1	A	100		12		300				
★MDA980-3	S		MDA980-1	A	200		12		300				
★MDA980-4	S		MDA980-1	A	300		12		300				
★MDA980-5	S		MDA980-1	A	400		12		300				
★MDA980-6	S		MDA980-1	A	600		12		300				
★MDA990-1	S		MDA980-1	A			27		300				
★MDA990-2	S		MDA980-1	A			27		300				
★MDA990-3	S		MDA980-1	A			27		300				
★MDA990-4	S		MDA980-1	A			27		300				
★MDA990-5	S		MDA980-1	A			27		300				
★MDA990-6	S		MDA980-1	A			27		300				
★MDA1330H	S		MDA1330H	A	5000		1.0		25				
★MDA1331H	S		MDA1330H	A	10000		1.0		25				
★MDA1332H	S		MDA1330H	A	5000		2.5		250				
★MDA1333H	S		MDA1330H	A	10000		2.5		250				
★MDA1491-1	S		MDA942	A	50		1.5		25				
★MDA1491-2	S		MDA942	A	100		1.5		25				
★MDA1491-3	S		MDA942	A	200		1.5		25				
★MDA1491-4	S		MDA942	A	300		1.5		25				
★MDA1491-5	S		MDA942	A	400		1.5		25				
★MDA1491-6	S		MDA942	A	600		1.5		25				
★MDA1505-1	S		MDA942	A	50		8.0		200				
★MDA1505-2	S		MDA942	A	100		8.0		200				
★MDA1505-3	S		MDA942	A	200		8.0		200				
★MDA1505-4	S		MDA942	A	300		8.0		200				
★MDA1505-5	S		MDA942	A	400		8.0		200				
★MDA1505-6	S		MDA942	A	600		8.0		200				
★MDA1591-1	S		MDA942	A	50		4.0		100				
★MDA1591-2	S		MDA942	A	100		4.0		100				
★MDA1591-3	S		MDA942	A	200		4.0		100				
★MDA1591-4	S		MDA942	A	300		4.0		100				
★MDA1591-5	S		MDA942	A	400		4.0		100				
★MDA1591-6	S		MDA942	A	600		4.0		100				
★MMD70	S		MMD70	S	50	0.75	100m	0.1*	.015				
★MMD6050	S		MMD6050	S	70	0.55	100m	0.1*	.005				
★MMD6100	S		MMD6100	S	70	0.55	100m	0.1*	.005				
★MMD6150	S		MMD6150	S	70	0.55	100m	0.1*	.005				
★MMD7000	S		MMD7000	S	70	0.55	100m	0.1*	.005				
★MMD7001	S		MMD7001	S	40	0.55	100m	0.1*	.003*				
★MR2525	S		MR2525	G	23	1.1	25	0.05	600				

TABLE 2 - TRANSIENT SUPPRESSORS

Short-form specifications for zener diodes characterized as transient suppressors.

KEY

TYPE	MATERIAL	REPLACEMENT	REFERENCE	$V_{(BR)R}$ @ I_R Volts / mA		V_{RWM} Volts	V_R (surge) Volts	I_R † (surge) Amp	TC %/°C
				Min			Max	Max	Max
Numerical Listing of Registered Type Numbers.									
	S – Silicon								
		Type number of recommended replacement or of nearest electrical equivalent							
			First type number on data sheet where the EIA type or replacement part is located.						
				Breakdown Voltage					
					Reverse Current				
						Reverse Voltage (working) @ $T_A = 25^0C$			
							Peak Reverse Voltage during Reverse Surge		
								Maximum Surge Current	
									Temperature Coefficient of Breakdown Voltage

TRANSIENT SUPPRESSOR DIODES INDEX

1N5555-1N5637

TYPE	MATERIAL	REPLACEMENT	REFERENCE	$V_{(BR)R}$ @ I_R Volts / mA		V_{RWM} Volts	V_R (surge) Volts	I_R † (surge) Amp	TC %/°C
				Min			Max	Max	Max
1N5555	S	MZ5555	MZ5555	33	1.0	30.5	47.5	32	
1N5556	S	MZ5556	MZ5555	43.7	1.0	40.3	63.5	24	
1N5557	S	MZ5557	MZ5555	54	1.0	49	78.5	19	
1N5558	S	MZ5558	MZ5555	191	1.0	175	265	5.7	
1N5610	S	1N2991B	1N2970	33	1.0	30.5	47.5	32	0.1
1N5611	S	1N2995B	1N2970	43.7	1.0	40.3	63.5	24	0.1
1N5612	S	1N2997B	1N2970	54	1.0	49	78.5	19	0.1
1N5613	S	1N3015B	1N2970	191	1.0	175	265	5.7	0.1
1N5629	S	1N2970A	1N2970	6.12	10	5.5	10.8	139	0.057
1N5629A	S	1N2970B	1N2970	6.45	10	5.8	10.5	143	0.057
1N5630	S	1N2971A	1N2970	6.75	10	6.05	11.7	128	0.061
1N5630A	S	1N2971B	1N2970	7.13	10	6.40	11.3	132	0.061
1N5631	S	1N2972A	1N2970	7.38	10	6.63	12.5	120	0.065
1N5631A	S	1N2972B	1N2970	7.79	10	7.02	12.1	124	0.065
1N5632	S	1N2973A	1N2970	8.19	1.0	7.37	13.8	109	0.068
1N5632A	S	1N2973B	1N2970	8.65	1.0	7.78	13.4	112	0.068
1N5633	S	1N2974A	1N2970	9.0	1.0	8.10	15	100	0.073
1N5633A	S	1N2974B	1N2970	9.5	1.0	8.55	1.45	103	0.073
1N5634	S	1N2975A	1N2970	9.9	1.0	8.92	16.2	93	0.075
1N5634A	S	1N2975B	1N2970	10.5	1.0	9.40	15.6	96	0.075
1N5635	S	1N2976A	1N2970	10.8	1.0	9.72	17.3	87	0.078
1N5635A	S	1N2976B	1N2970	11.4	1.0	10	16.7	90	0.078
1N5636	S	1N2977A	1N2970	11.7	1.0	10.5	19	79	0.081
1N5636A	S	1N2977B	1N2970	12.4	1.0	11.1	18.2	82	0.081
1N5637	S	1N2979A	1N2970	13.5	1.0	12.1	22	68	0.084

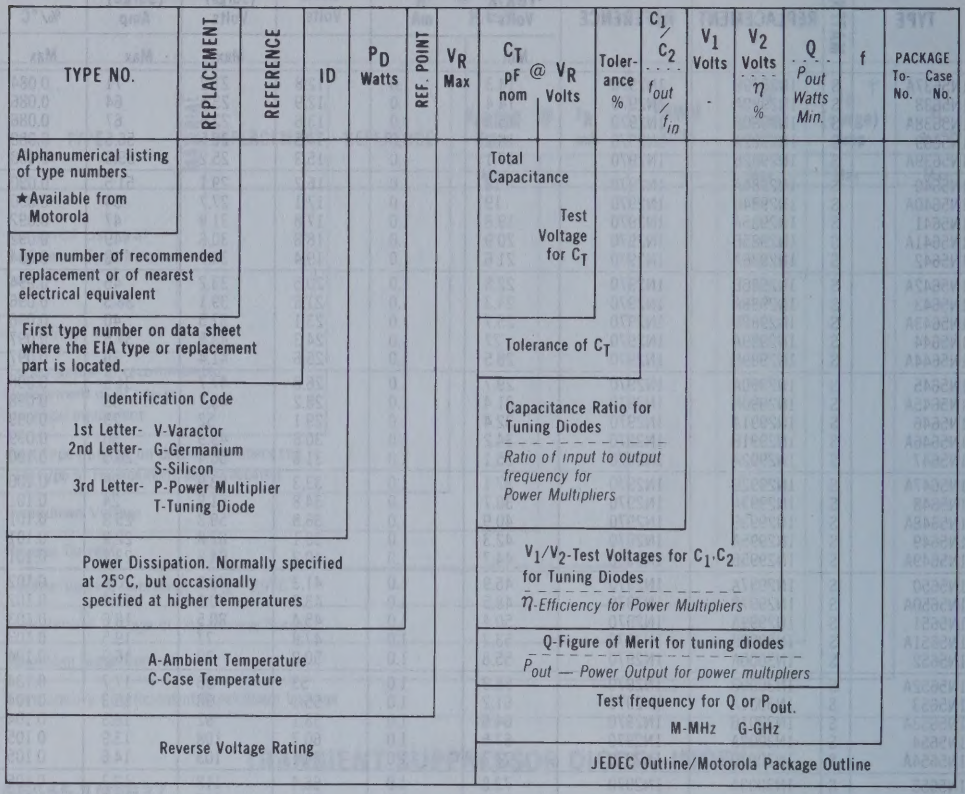
† Surge Current, $i_R = \frac{I_{R(MAX)}}{2}$ @ 1MS, exponential decay.

TYPE	MATERIAL	REPLACEMENT	REFERENCE	$V_{(BR)R}$ @ I_R Volts mA		V_{RWM} Volts	V_R (surge) Volts	I_R † (surge) Amp	TC %/°C
				Min			Max	Max	Max
1N5637A	S	1N2979B	1N2970	14.3	1.0	12.8	21.2	71	0.084
1N5638	S	1N2980A	1N2970	14.4	1.0	12.9	23.5	64	0.086
1N5638A	S	1N2980B	1N2970	15.2	1.0	13.6	22.5	67	0.086
1N5639	S	1N2982A	1N2970	16.2	1.0	14.5	26.5	56.5	0.088
1N5639A	S	1N2982B	1N2970	17.1	1.0	15.3	25.2	59.5	0.088
1N5640	S	1N2984A	1N2970	18	1.0	16.2	29.1	51.5	0.090
1N5640A	S	1N2984B	1N2970	19	1.0	17.1	27.7	54	0.090
1N5641	S	1N2985A	1N2970	19.8	1.0	17.8	31.9	47	0.092
1N5641A	S	1N2985B	1N2970	20.9	1.0	18.8	30.6	49	0.092
1N5642	S	1N2986A	1N2970	21.6	1.0	19.4	34.7	43	0.094
1N5642A	S	1N2986B	1N2970	22.8	1.0	20.5	33.2	45	0.094
1N5643	S	1N2988A	1N2970	24.3	1.0	21.8	39.1	38.5	0.096
1N5643A	S	1N2988B	1N2970	25.7	1.0	23.1	37.5	40	0.096
1N5644	S	1N2989A	1N2970	27	1.0	24.3	43.5	34.5	0.097
1N5644A	S	1N2989B	1N2970	28.5	1.0	25.6	41.4	36	0.097
1N5645	S	1N2990A	1N2970	29.7	1.0	26.8	47.7	31.5	0.098
1N5645A	S	1N2990B	1N2970	31.4	1.0	28.2	45.7	33	0.098
1N5646	S	1N2991A	1N2970	32.4	1.0	29.1	52	29	0.099
1N5646A	S	1N2991B	1N2970	34.2	1.0	30.8	49.9	30	0.099
1N5647	S	1N2992A	1N2970	35.1	1.0	31.6	56.4	26.5	0.100
1N5647A	S	1N2992B	1N2970	37.1	1.0	33.3	53.9	28	0.100
1N5648	S	1N2993A	1N2970	38.7	1.0	34.8	61.9	24	0.101
1N5648A	S	1N2993B	1N2970	40.9	1.0	36.8	59.3	25.3	0.101
1N5649	S	1N2995A	1N2970	42.3	1.0	38.1	67.8	22.2	0.101
1N5649A	S	1N2995B	1N2970	44.7	1.0	40.2	64.8	23.2	0.101
1N5650	S	1N2997A	1N2970	45.9	1.0	41.3	73.5	20.4	0.102
1N5650A	S	1N2997B	1N2970	48.5	1.0	43.6	70.1	21.4	0.102
1N5651	S	1N2999A	1N2970	50.4	1.0	45.4	80.5	18.6	0.103
1N5651A	S	1N2999B	1N2970	53.2	1.0	47.8	77	19.5	0.103
1N5652	S	1N3000A	1N2970	55.8	1.0	50.2	89	16.9	0.104
1N5652A	S	1N3000B	1N2970	58.9	1.0	53	85	17.7	0.104
1N5653	S	1N3001A	1N2970	61.2	1.0	55.1	98	15.3	0.104
1N5653A	S	1N3001B	1N2970	64.6	1.0	58.1	92	16.3	0.104
1N5654	S	1N3002A	1N2970	67.5	1.0	60.7	108	13.9	0.105
1N5654A	S	1N3002B	1N2970	71.3	1.0	64.1	103	14.6	0.105
1N5655	S	1N3003A	1N2970	73.8	1.0	66.4	118	12.7	0.105
1N5655A	S	1N3003B	1N2970	77.9	1.0	70.1	113	13.3	0.105
1N5656	S	1N3004A	1N2970	81.9	1.0	73.7	131	11.4	0.106
1N5656A	S	1N3004B	1N2970	86.5	1.0	77.8	125	12	0.106
1N5657	S	1N3005A	1N2970	90	1.0	81	144	10.4	0.106
1N5657A	S	1N3005B	1N2970	95	1.0	85.5	137	11	0.106
1N5658	S	1N3007A	1N2970	99	1.0	89.2	158	9.5	0.107
1N5658A	S	1N3007B	1N2970	105	1.0	94	152	9.9	0.107
1N5659	S	1N3008A	1N2970	108	1.0	97.2	173	8.7	0.107
1N5659A	S	1N3008B	1N2970	114	1.0	102	165	9.1	0.107
1N5660	S	1N3009A	1N2970	117	1.0	105	187	8.0	0.107
1N5660A	S	1N3009B	1N2970	124	1.0	111	179	8.4	0.107
1N5661	S	1N3011A	1N2970	135	1.0	121	215	7.0	0.108
1N5661A	S	1N3011B	1N2970	143	1.0	128	207	7.2	0.108
1N5662	S	1N3012A	1N2970	144	1.0	130	230	6.5	0.108
1N5662A	S	1N3012B	1N2970	152	1.0	136	219	6.8	0.108
1N5663	S	1N3013A	1N2970	153	1.0	138	244	6.2	0.108
1N5663A	S	1N2974B	1N2970	9.5	1.0	8.55	14.5	103	0.073
1N5664	S	1N3014A	1N2970	162	1.0	146	258	5.8	0.108
1N5664A	S	1N3014B	1N2970	171	1.0	154	246	6.1	0.108
1N5665	S	1N3015A	1N2970	180	1.0	162	287	5.2	0.108
1N5665A	S	1N3015B	1N2970	190	1.0	171	274	5.5	0.108
1N5907	S			6.0	1.0	5.0	8.6	165	
1N5908	S			6.0	1.0	5.0	8.6	165	
MPZ5-16A	S		MPZ6-16A	16	400	14	24	200	
MPZ5-16B	S		MPZ5-16A	16	400	14	20	200	
MPZ5-32A	S		MPZ5-16A	32	200	28	50	100	
MPZ5-32B	S		MPZ5-16A	32	200	28	45	100	
MPZ5-32C	S		MPZ5-16A	32	200	28	40	100	
MPZ5-180A	S		MPZ5-16A	180	30	165	250	20	
MPZ5-180B	S		MPZ5-16A	180	30	165	225	20	
MPZ5-18C	S		MPZ5-16A	180	30	165	205	20	
MZ5555	S		MZ5555	33	1.0	30.5	47.5	32	0.093
MZ5556	S		MZ5555	43.7	1.0	40.3	63.5	24	0.095
MZ5557	S		MZ5555	54	1.0	49	78.5	19	0.099
MZ5558	S		MZ5555	191	1.0	1	265	5.7	0.110

† Surge Current, $i_R = \frac{I_{R(MAX)}}{2}$ @1MS, exponential decay.

TABLE 3 - VARACTORS

Short-form specifications for Varactor Diodes characterized for both tuning and frequency multiplication applications.


TYPE NO.
REPLACEMENT
REFERENCE
ID
P_D Watts
REF. POINT
V_R Max
C_T pF @ V_R Volts nom
Tolerance %
C_1/C_2 f_{out}/f_{in}
V_1 Volts
V_2 Volts η %
Q P_{out} Watts Min.
f
PACKAGE To- Case No. No.
Alphanumerical listing of type numbers
★Available from Motorola
Type number of recommended replacement or of nearest electrical equivalent
First type number on data sheet where the EIA type or replacement part is located.
Identification Code
1st Letter- V-Varactor
2nd Letter- G-Germanium
S-Silicon
3rd Letter- P-Power Multiplier
T-Tuning Diode
Power Dissipation. Normally specified at 25°C, but occasionally specified at higher temperatures
A-Ambient Temperature
C-Case Temperature
Reverse Voltage Rating
Total Capacitance
Test Voltage for C_T
Tolerance of C_T
Capacitance Ratio for Tuning Diodes
Ratio of input to output frequency for Power Multipliers
V_1/V_2-Test Voltages for $C_1 \cdot C_2$ for Tuning Diodes
η-Efficiency for Power Multipliers
Q-Figure of Merit for tuning diodes
P_{out} — Power Output for power multipliers
Test frequency for Q or P_{out}.
M-MHz G-GHz
JEDEC Outline/Motorola Package Outline

1N836-1N3677

TYPE NO.	REPLACEMENT	REFERENCE	ID	P_D Watts	REF. POINT	V_R Max	C_T pF nom	@ V_R Volts	Tolerance %	C_1/C_2 f_{out}/f_{in}	V_1 Volts	V_2 Volts η %	Q P_{out} Watts Min.	f	PACKAGE To- No.	Case No.
1N836	-	-	VGT	.125	A	5	3.0	0	33	-	-	-	8	1000 M	7/-	
1N894	-	-	VGT	.125	A	5	2.75	0	25	-	-	-	10	1000 M	7/-	
1N895	-	-	VGT	.125	A	5	2.5	0	20	-	-	-	14	1000 M	7/-	
1N896	-	-	VGT	.125	A	5	2.2	0	10	-	-	-	18	1000 M	7/-	
1N950			VST	0.25	A	130	35	4.0	20	2.5	4.0	130	7.0	50 M	7/-	
1N951			VST	0.25	A	80	50	4.0	20	2.4	1.0	10	7.0	50 M	7/-	
1N952			VST	0.25	A	60	70	4.0	20	2.4	1.0	10	7.0	50 M	7/-	
1N953			VST	0.25	A	25	100	4.0	20	2.4	1.0	10	7.0	50 M	7/-	
1N954			VST	0.25	A	25		4.0	20	2.4	1.0	10	7.0	50 M	7/-	
1N955			VST	0.25	A	25		4.0	20	2.4	1.0	10	7.0	50 M	7/-	
1N956			VST	0.25	A	25		4.0	20	2.4	1.0	10	7.0	50 M	7/-	
1N2386	-	-	VGT	0.20	A	5	3.0	0	33	-	-	-	8	1000 M	/-	
1N2627			VST	0.2	A	5	2.75	0	27	1.75	0	5.0	10	1000 M	NS/-	
1N2628			VST	0.2	A	5	2.5	0	20	1.5	0	5.0	14	1000 M	NS/-	
1N2629	-	-	VGT	0.20	A	5	2.2	0	10	-	-	-	18	1000 M	/-	
1N3182			VST	.163	A	20	33	4.0	30	0.7	4.0	10	65	50 M	7/-	
1N3488			VST	0.5	A	15	56	4.0	10	2.5		0.1	7.0	50 M	14/-	
1N3551	1N5472A	1N5461A	VST	0.15	A	11	50	4.0	6.0	1.35	4.0	8.0	30	50 M	7/-	
1N3552	1N5447A	1N5441A	VST	0.15	A	22	21.5	4.0	6.0	1.35	4.0	8.0	25	50 M	7/-	
1N3554	1N5141A	1N5139	VST	0.5	A	100	12	4.0	20	4.5	2.0	80	60	50 M	14/-	
1N3555	1N5144	1N5139	VST	0.5	A	100	20	4.0	20	4.5	2.0	80	60	50 M	14/-	
1N3556	1N5148	1N5139	VST	0.5	A	100	47	4.0	10	5.0	2	100	100	100 M	14/-	
1N3557	1N5144	1N5139	VST	0.5	A	210	24	8.0	20	5.0	4	200	75	50 M	14/-	
1N3628	1N5452A	1N5441A	VST	0.25	A	20	50	4.0	6.0	2.5	4.0	20	30	50 M	7/-	
1N3677			VST	0.25	A	20	21.3	4.0	6.0	2.45	4.0	20	25	50 M	7/-	

TYPE NO.	REPLACEMENT	REFERENCE	ID	P_D Watts	REF. POINT	V_R Max	C_T pF nom	@ V_R Volts	Tolerance %	C_1/C_2 / f_{out}/f_{in}	V_1 Volts -	V_2 Volts / η %	Q / P_{out} Watts Min.	f	PACKAGE To-Case No. No.
1N3770			VST		A	5	2.0							M	7/-
1N3945	1N5447A	1N5441A	VST	0.50	A	20	20	4.0	10	1.15	3.0	5.0	7.0	50 M	14/-
1N3946			VST	0.50	A	9	71	4.0	12	1.32	4.0	8.0	7.0	50 M	14/-
1N3947	1N5474A	1N5461A	VST	0.50	A	9	70	4.0	20	1.15	3.0	5.0	9.0	50 M	14/-
1N4091	1N5461A	1N5461A	VST	0.30	A	6	4.2			2.5				M	
★1N4386			VSP	25	C	250	50*	6.0		*3*		*65*	*32.5*	150 M	4/44
★1N4387		1N4387	VSP	20	C	150	35*	6.0		*3*		*50*	*15*	450 M	4/44
★1N4388		1N4388	VSP	10	C	100	20*	6.0		*2*		*55*	*11*	1000 M	4/44
1N4598			VST	0.25	A	90	22	4.0	20	4.5	2.0	80	50	50 M	7/-
1N4599			VST	0.50	A	110	47	4.0	5	5.0	2.0	100	100	50 M	14/-
1N4609			VST	0.25	A	35	22	4.0	15	3.5	1.0	30	60	50 M	7/-
1N4786	1N5441A	1N5441A	VST	0.50	A	25	6.8	4.0	20	2.16	0	4.0	15	50 M	14/-
1N4786A	1N5441A	1N5441A	VST	0.50	A	25	6.8	4.0	10	2.16	4.0	25	15	50 M	14/-
1N4786B	1N5441B	1N5441A	VST	0.50	A	25	6.8	4.0	5.0	2.16	4.0	25	15	50 M	14/-
1N4786C	1N5441C	1N5441A	VST	0.50	A	25	6.8	4.0	2.0	2.16	4.0	25	15	50 M	14/-
1N4786D	1N5441D	1N5441A	VST	0.50	A	25	6.8	4.0	1.0	2.16	4.0	25	15	50 M	14/-
1N4787	1N5442A	1N5441A	VST	0.50	A	25	8.2	4.0	20	2.19	4.0	25	15	50 M	14/-
1N4787A	1N5442A	1N5441A	VST	0.50	A	25	8.2	4.0	10	2.19	4.0	25	15	50 M	14/-
1N4787B	1N5442B	1N5441A	VST	0.50	A	25	8.2	4.0	5.0	2.19	4.0	25	15	50 M	14/-
1N4787C	1N5442C	1N5441A	VST	0.50	A	25	8.2	4.0	2.0	2.19	4.0	25	15	50 M	14/-
1N4787D	1N5442D	1N5441A	VST	0.50	A	25	8.2	4.0	1.0	2.19	4.0	25	15	50 M	14/-
1N4788	1N5443A	1N5441A	VST	0.50	A	25	10	4.0	20	2.26	4.0	25	15	50 M	14/-
1N4788A	1N5443A	1N5441A	VST	0.50	A	25	10	4.0	10	2.26	4.0	25	15	50 M	14/-
1N4788B	1N5443B	1N5441A	VST	0.50	A	25	10	4.0	5.0	2.26	4.0	25	15	50 M	14/-
1N4788C	1N5443C	1N5441A	VST	0.50	A	25	10	4.0	2.0	2.26	4.0	25	15	50 M	14/-
1N4788D	1N5443D	1N5441A	VST	0.50	A	25	10	4.0	1.0	2.26	4.0	25	15	50 M	14/-
1N4789	1N5444A	1N5441A	VST	0.50	A	25	12	4.0	20	2.26	4.0	25	15	50 M	14/-
1N4789A	1N5444A	1N5441A	VST	0.50	A	25	12	4.0	10	2.26	4.0	25	15	50 M	14/-
1N4789B	1N5444B	1N5441A	VST	0.50	A	25	12	4.0	5.0	2.26	4.0	25	15	50 M	14/-
1N4789C	1N5444C	1N5441A	VST	0.50	A	25	12	4.0	2.0	2.26	4.0	25	15	50 M	14/-
1N4789D	1N5444D	1N5441A	VST	0.50	A	25	12	4.0	1.0	2.26	4.0	25	15	50 M	14/-
1N4790	1N5445A	1N5441A	VST	0.50	A	25	15	4.0	20	2.26	4.0	25	15	50 M	14/-
1N4790A	1N5445A	1N5441A	VST	0.50	A	25	15	4.0	10	2.26	4.0	25	15	50 M	14/-
1N4790B	1N5445B	1N5441A	VST	0.50	A	25	15	4.0	5.0	2.26	4.0	25	15	50 M	14/-
1N4790C	1N5445C	1N5441A	VST	0.50	A	25	15	4.0	2.0	2.26	4.0	25	15	50 M	14/-
1N4790D	1N5445D	1N5441A	VST	0.50	A	25	15	4.0	1.0	2.26	4.0	25	15	50 M	14/-
1N4791	1N5446A	1N5441A	VST	0.50	A	20	18	4.0	20	2.04	4.0	20	15	50 M	14/-
1N4791A	1N5446A	1N5441A	VST	0.50	A	20	18	4.0	10	2.04	4.0	20	15	50 M	14/-
1N4791B	1N5446B	1N5441A	VST	0.50	A	20	18	4.0	5.0	2.04	4.0	20	15	50 M	14/-
1N4791C	1N5446C	1N5441A	VST	0.50	A	20	18	4.0	2.0	2.04	4.0	20	15	50 M	14/-
1N4791D	1N5446D	1N5441A	VST	0.50	A	20	18	4.0	1.0	2.04	4.0	20	15	50 M	14/-
1N4792	1N5448A	1N5441A	VST	0.50	A	20	22	4.0	20	2.05	4.0	20	15	50 M	14/-
1N4792A	1N5448A	1N5441A	VST	0.50	A	20	22	4.0	10	2.05	4.0	20	15	50 M	14/-
1N4792B	1N5448B	1N5441A	VST	0.50	A	20	22	4.0	5.0	2.05	4.0	20	15	50 M	14/-
1N4792C	1N5448C	1N5441A	VST	0.50	A	20	22	4.0	2.0	2.05	4.0	20	15	50 M	14/-
1N4792D	1N5448D	1N5441A	VST	0.50	A	20	22	4.0	1.0	2.05	4.0	20	15	50 M	14/-
1N4793	1N5449A	1N5441A	VST	0.50	A	20	27	4.0	20	2.05	4.0	20	15	50 M	14/-
1N4793A	1N5449A	1N5441A	VST	0.50	A	20	27	4.0	10	2.05	4.0	20	15	50 M	14/-
1N4793B	1N5449B	1N5441A	VST	0.50	A	20	27	4.0	5.0	2.05	4.0	20	15	50 M	14/-
1N4793C	1N5449C	1N5441A	VST	0.50	A	20	27	4.0	2.0	2.05	4.0	20	15	50 M	14/-
1N4793D	1N5449D	1N5441A	VST	0.50	A	20	27	4.0	1.0	2.05	4.0	20	15	50 M	14/-
1N4794	1N5450A	1N5441A	VST	0.50	A	20	33	4.0	20	2.06	4.0	20	15	50 M	14/-
1N4794A	1N5450A	1N5441A	VST	0.50	A	20	33	4.0	10	2.06	4.0	20	15	50 M	14/-
1N4794B	1N5450B	1N5441A	VST	0.50	A	20	33	4.0	5.0	2.06	4.0	20	15	50 M	14/-
1N4794C	1N5450C	1N5441A	VST	0.50	A	20	33	4.0	2.0	2.06	4.0	20	15	50 M	14/-
1N4794D	1N5450D	1N5441A	VST	0.50	A	20	33	4.0	1.0	2.06	4.0	20	15	50 M	14/-
1N4795	1N5451A	1N5441A	VST	0.50	A	20	39	4.0	20	2.07	4.0	20	15	50 M	14/-
1N4795A	1N5451A	1N5441A	VST	0.50	A	20	39	4.0	10	2.07	4.0	20	15	50 M	14/-
1N4795B	1N5451B	1N5441A	VST	0.50	A	20	39	4.0	5.0	2.07	4.0	20	15	50 M	14/-
1N4795C	1N5451C	1N5441A	VST	0.50	A	20	39	4.0	2.0	2.07	4.0	20	15	50 M	14/-
1N4795D	1N5451D	1N5441A	VST	0.50	A	20	39	4.0	1.0	2.07	4.0	20	15	50 M	14/-
1N4796	1N5452A	1N5441A	VST	0.50	A	20	47	4.0	20	2.07	4.0	20	15	50 M	14/-
1N4796A	1N5452A	1N5441A	VST	0.50	A	20	47	4.0	10	2.07	4.0	20	15	50 M	14/-
1N4796B	1N5452B	1N5441A	VST	0.50	A	20	47	4.0	5.0	2.07	4.0	20	15	50 M	14/-
1N4796C	1N5452C	1N5441A	VST	0.50	A	20	47	4.0	2.0	2.07	4.0	20	15	50 M	14/-
1N4796D	1N5452D	1N5441A	VST	0.50	A	20	47	4.0	1.0	2.07	4.0	20	15	50 M	14/-
1N4797	1N5453A	1N5441A	VST	0.50	A	15	56	4.0	20	1.81	4.0	15	15	50 M	14/-
1N4797A	1N5453A	1N5441A	VST	0.50	A	15	56	4.0	10	1.81	4.0	15	15	50 M	14/-
1N4797B	1N5453B	1N5441A	VST	0.50	A	15	56	4.0	5.0	1.81	4.0	15	15	50 M	14/-
1N4797C	1N5453C	1N5441A	VST	0.50	A	15	56	4.0	2.0	1.81	4.0	15	15	50 M	14/-

TYPE NO.	REPLACEMENT	REFERENCE	ID	P_D Watts	REF. POINT	V_R Max	C_T pF nom	@ V_R Volts	Tolerance %	C_1/C_2 f_{out}/f_{in}	V_1 Volts	V_2 Volts η %	Q P_{out} Watts Min.	f	PACKAGE To-No.	Case No.
1N4797D	1N5453D	1N5441A	VST	0.50	A	15	56	4.0	1.0	1.81	4.0	15	15	50 M	14/-	
1N4798	1N5454A	1N5441A	VST	0.50	A	15	68	4.0	20	1.81	4.0	15	15	50 M	14/-	
1N4798A	1N5454A	1N5441A	VST	0.50	A	15	68	4.0	10	1.81	4.0	15	15	50 M	14/-	
1N4798B	1N5454B	1N5441A	VST	0.50	A	15	68	4.0	5.0	1.81	4.0	15	15	50 M	14/-	
1N4798C	1N5454C	1N5441A	VST	0.50	A	15	68	4.0	2.0	1.81	4.0	15	15	50 M	14/-	
1N4798D	1N5454D	1N5441A	VST	0.50	A	15	68	4.0	1.0	1.81	4.0	15	15	50 M	14/-	
1N4799	1N5455A	1N5441A	VST	0.50	A	15	82	4.0	20	1.82	4.0	15	15	50 M	14/-	
1N4799A	1N5455A	1N5441A	VST	0.50	A	15	82	4.0	10	1.82	4.0	15	15	50 M	14/-	
1N4799B	1N5455B	1N5441A	VST	0.50	A	15	82	4.0	5.0	1.82	4.0	15	15	50 M	14/-	
1N4799C	1N5455C	1N5441A	VST	0.50	A	15	82	4.0	2.0	1.82	4.0	15	15	50 M	14/-	
1N4799D	1N5455D	1N5441A	VST	0.50	A	15	82	4.0	1.0	1.82	4.0	15	15	50 M	14/-	
1N4800	1N5456A	1N5441A	VST	0.50	A	15	100	4.0	20	1.83	4.0	15	15	50 M	14/-	
1N4800A	1N5456A	1N5441A	VST	0.50	A	15	100	4.0	20	1.83	4.0	15	15	50 M	14/-	
1N4800B	1N5456B	1N5441A	VST	0.50	A	15	100	4.0	5.0	1.83	4.0	15	15	50 M	14/-	
1N4800C	1N5456C	1N5441A	VST	0.50	A	15	100	4.0	2.0	1.83	4.0	15	15	50 M	14/-	
1N4800D	1N5456D	1N5441A	VST	0.50	A	15	100	4.0	1.0	1.83	4.0	15	15	50 M	14/-	
1N4801	1N5139	1N5139	VST	0.50	A	100	6.8	4.0	20	3.84	4.0	100	15	50 M	14/-	
1N4801A	1N5139A	1N5139	VST	0.50	A	100	6.8	4.0	10	3.84	4.0	100	15	50 M	14/-	
1N4801B	1N5139B	1N5139	VST	0.50	A	100	6.8	4.0	5.0	3.84	4.0	100	15	50 M	14/-	
1N4801C	1N5139C	1N5139	VST	0.50	A	100	6.8	4.0	2.0	3.84	4.0	100	15	50 M	14/-	
1N4801D	1N5139D	1N5139	VST	0.50	A	100	6.8	4.0	1.0	3.84	4.0	100	15	50 M	14/-	
1N4802	1N5462A	1N5461A	VST	0.50	A	100	8.2	4.0	20	3.79	4.0	100	15	50 M	14/-	
1N4802A	1N5462A	1N5461A	VST	0.50	A	100	8.2	4.0	10	3.79	4.0	100	15	50 M	14/-	
1N4802B	1N5462B	1N5461A	VST	0.50	A	100	8.2	4.0	5.0	3.79	4.0	100	15	50 M	14/-	
1N4802C	1N5462C	1N5461A	VST	0.50	A	100	8.2	4.0	2.0	3.79	4.0	100	15	50 M	14/-	
1N4802D			VST	0.50	A	100	8.2	4.0	1.0	3.79	4.0	100	15	50 M	14/-	
1N4803	1N5140	1N5439	VST	0.50	A	100	10	4.0	20	4.13	4.0	100	15	50 M	14/-	
1N4803A	1N5140A	1N5439	VST	0.50	A	100	10	4.0	10	4.13	4.0	100	15	50 M	14/-	
1N4803B	1N5140B	1N5439	VST	0.50	A	100	10	4.0	5.0	4.13	4.0	100	15	50 M	14/-	
1N4803C	1N5140C	1N5439	VST	0.50	A	100	10	4.0	2.0	4.13	4.0	100	15	50 M	14/-	
1N4803D	1N5140D	1N5439	VST	0.50	A	100	10	4.0	1.0	4.13	4.0	100	15	50 M	14/-	
1N4804	1N5141	1N5139	VST	0.50	A	100	12	4.0	20	4.15	4.0	100	15	50 M	14/-	
1N4804A	1N5141A	1N5139	VST	0.50	A	100	12	4.0	10	4.15	4.0	100	15	50 M	14/-	
1N4804B	1N5141B	1N5139	VST	0.50	A	100	12	4.0	5.0	4.15	4.0	100	15	50 M	14/-	
1N4804C	1N5141C	1N5139	VST	0.50	A	100	12	4.0	2.0	4.15	4.0	100	15	50 M	14/-	
1N4804D	1N5141D	1N5139	VST	0.50	A	100	12	4.0	1.0	4.15	4.0	100	15	50 M	14/-	
1N4805	1N5142	1N5139	VST	0.50	A	100	15	4.0	20	4.15	4.0	100	15	50 M	14/-	
1N4805A	1N5142A	1N5139	VST	0.50	A	100	15	4.0	10	4.15	4.0	100	15	50 M	14/-	
1N4805B	1N5142B	1N5139	VST	0.50	A	100	15	4.0	5.0	4.15	4.0	100	15	50 M	14/-	
1N4805C	1N5142C	1N5139	VST	0.50	A	100	15	4.0	2.0	4.15	4.0	100	15	50 M	14/-	
1N4805D	1N5142D	1N5139	VST	0.50	A	100	15	4.0	1.0	4.15	4.0	100	15	50 M	14/-	
1N4806	1N5143	1N5139	VST	0.50	A	90	18	4.0	20	4.15	4.0	90	15	50 M	14/-	
1N4806A	1N5143A	1N5139	VST	0.50	A	90	18	4.0	10	4.15	4.0	90	15	50 M	14/-	
1N4806B	1N5143B	1N5139	VST	0.50	A	90	18	4.0	5.0	4.15	4.0	90	15	50 M	14/-	
1N4806C	1N5143C	1N5139	VST	0.50	A	90	18	4.0	2.0	4.15	4.0	90	15	50 M	14/-	
1N4806D	1N5143D	1N5139	VST	0.50	A	90	18	4.0	1.0	4.15	4.0	90	15	50 M	14/-	
1N4807	1N5144	1N5139	VST	0.50	A	90	22	4.0	20	4.15	4.0	90	15	50 M	14/-	
1N4807A	1N5144A	1N5139	VST	0.50	A	90	22	4.0	10	4.15	4.0	90	15	50 M	14/-	
1N4807B	1N5144B	1N5139	VST	0.50	A	90	22	4.0	5.0	4.15	4.0	90	15	50 M	14/-	
1N4807C	1N5144C	1N5139	VST	0.50	A	90	22	4.0	2.0	4.15	4.0	90	15	50 M	14/-	
1N4807D	1N5144D	1N5139	VST	0.50	A	90	22	4.0	1.0	4.15	4.0	90	15	50 M	14/-	
1N4808	1N5145	1N5139	VST	0.50	A	65	27	4.0	20	3.62	4.0	65	15	50 M	14/-	
1N4808A	1N5145A	1N5139	VST	0.50	A	65	27	4.0	10	3.62	4.0	65	15	50 M	14/-	
1N4808B	1N5145B		VST	0.50	A	65	27	4.0	5.0	3.62	4.0	65	15	50 M	14/-	
1N4808C	1N5145C		VST	0.50	A	65	27	4.0	2.0	3.62	4.0	65	15	50 M	14/-	
1N4808D	1N5145D		VST	0.50	A	65	27	4.0	1.0	3.62	4.0	65	15	50 M	14/-	
1N4809	1N5146	1N5139	VST	0.50	A	65	33	4.0	20	3.48	4.0	60	15	50 M	14/-	
1N4809A	1N5146A	1N5139	VST	0.50	A	65	33	4.0	10	3.48	4.0	60	15	50 M	14/-	
1N4809B	1N5146B		VST	0.50	A	65	33	4.0	5.0	3.48	4.0	60	15	50 M	14/-	
1N4809C	1N5146C		VST	0.50	A	65	33	4.0	2.0	3.48	4.0	60	15	50 M	14/-	
1N4809D	1N5146D		VST	0.50	A	65	33	4.0	1.0	3.48	4.0	60	15	50 M	14/-	
1N4810	1N5147	1N5139	VST	0.50	A	55	39	4.0	20	3.33	4.0	55	15	50 M	14/-	
1N4810A	1N5147A	1N5139	VST	0.50	A	55	39	4.0	10	3.33	4.0	55	15	50 M	14/-	
1N4810B	1N5147B		VST	0.50	A	55	39	4.0	5.0	3.33	4.0	55	15	50 M	14/-	
1N4810C	1N5147C		VST	0.50	A	55	39	4.0	2.0	3.33	4.0	55	15	50 M	14/-	
1N4810D	1N5147D		VST	0.50	A	55	39	4.0	1.0	3.33	4.0	55	15	50 M	14/-	
1N4811	1N5148	1N5139	VST	0.50	A	50	47	4.0	20	3.19	4.0	50	15	50 M	14/-	
1N4811A	1N5148A	1N5139	VST	0.50	A	50	47	4.0	10	3.19	4.0	50	15	50 M	14/-	
1N4811B	1N5148B		VST	0.50	A	50	47	4.0	5.0	3.19	4.0	50	15	50 M	14/-	
1N4811C	1N5148C		VST	0.50	A	50	47	4.0	2.0	3.19	4.0	50	15	50 M	14/-	

TYPE NO.	REPLACEMENT	REFERENCE	ID	P_D Watts	REF. POINT	V_R Max	C_T pF @ V_R Volts nom		Tolerance %	C_1/C_2 f_{out}/f_{in}	V_1 Volts -	V_2 Volts η %	Q P_{out} Watts Min.	f	PACKAGE To-Case No. No.
1N4811D	1N5148D		VST	0.50	A	50	47	4.0	1.0	3.19	4.0	50	15	50 M	14/-
1N4812	1N5148	1N5139	VST	0.50	A	40	56	4.0	20	2.86	4.0	40	15	50 M	14/-
1N4812A	1N5148A	1N5139	VST	0.50	A	40	56	4.0	10	2.86	4.0	40	15	50 M	14/-
1N4812B	1N5148B		VST	0.50	A	40	56	4.0	5.0	2.86	4.0	40	15	50 M	14/-
1N4812C	1N5148C		VST	0.50	A	40	56	4.0	2.0	2.86	4.0	40	15	50 M	146-34-
1N4812D	1N5148D		VST	0.50	A	40	56	4.0	1.0	2.86	4.0	40	15	50 M	14/-
1N4813	1N5454A	1N5441A	VST	0.50	A	30	68	4.0	20	2.51	4.0	30	15	50 M	14/-
1N4813A	1N5454A	1N5441A	VST	0.50	A	30	68	4.0	10	2.51	4.0	30	15	50 M	14/-
1N4813B	1N5454B	1N5441A	VST	0.50	A	30	68	4.0	5.0	2.51	4.0	30	15	50 M	14/-
1N4813C	1N5454C	1N5441A	VST	0.50	A	30	68	4.0	2.0	2.51	4.0	30	15	50 M	14/-
1N4813D	1N5454D		VST	0.50	A	30	68	4.0	1.0	2.51	4.0	30	15	50 M	14/-
1N4814			VST	0.50	A	20	82	4.0	20	2.09	4.0	20	15	50 M	14/-
1N4814A			VST	0.50	A	20	82	4.0	10	2.09	4.0	20	15	50 M	14/-
1N4814B			VST	0.50	A	20	82	4.0	5.0	2.09	4.0	20	15	50 M	14/-
1N4814C			VST	0.50	A	20	82	4.0	2.0	2.09	4.0	20	15	50 M	14/-
1N4814D			VST	0.50	A	20	82	4.0	1.0	2.09	4.0	20	15	50 M	14/-
1N4815			VST	0.50	A	20	100	4.0	20	2.09	4.0	20	15	50 M	14/-
1N4815A			VST	0.50	A	20	100	4.0	10	2.09	4.0	20	15	50 M	14/-
1N4815B			VST	0.50	A	20	100	4.0	5.0	2.09	4.0	20	15	50 M	14/-
1N4815C			VST	0.50	A	20	100	4.0	2.0	2.09	4.0	20	15	50 M	14/-
1N4815D			VST	0.50	A	20	100	4.0	1.0	2.09	4.0	20	15	50 M	14/-
★1N4885			VSP	20	C	150	33	6.0	18	*3*		*55*	*22*	450 M	4/-
★1N4886			VSP	20	C	150	33	6.0	18	*3*		*60*	*15*	450 M	4/-
1N4941			VST	0.1	A		0.3		33				2000	1000 M	-/-
1N5136			VST	0.4	A	60	1.0		20	2.0	4.0	60	350	50 M	7/-
1N5136A			VST	0.4	A	60	1.0		10	2.0	4.0	60	350	50 M	7/-
1N5137			VST	0.4	A	60	2.2		20	2.0	4.0	60	350	50 M	7/-
1N5137A			VST	0.4	A	60	2.2		10	2.0	4.0	60	350	50 M	7/-
1N5138			VST	0.4	A	60	3.3		20	2.2	4.0	60	350	50 M	7/-
1N5138A			VST	0.4	A	60	3.3		10	2.2	4.0	60	350	50 M	7/-
★1N5139		1N5139	VST	0.4	A	60	6.8		10	2.7	4.0	60	350	50 M	7/-
★1N5139A		1N5139A	VST	0.4	A	60	6.8		5.0	2.7	4.0	60	350	50 M	7/-
★1N5140		1N5140	VST	0.4	A	60	10		10	2.8	4.0	60	300	50 M	7/-
★1N5140A		1N5140A	VST	0.4	A	60	10		5.0	2.8	4.0	60	300	50 M	7/-
★1N5141		1N5141	VST	0.4	A	60	12		10	2.8	4.0	60	300	50 M	7/-
★1N5141A		1N5141A	VST	0.4	A	60	12		5.0	2.8	4.0	60	300	50 M	7/-
★1N5142		1N5142	VST	0.4	A	60	15		10	2.8	4.0	60	250	50 M	7/-
★1N5142A		1N5142A	VST	0.4	A	60	15		5.0	2.8	4.0	60	250	50 M	7/-
★1N5143		1N5143	VST	0.4	A	60	18		10	2.8	4.0	60	250	50 M	7/-
★1N5143A		1N5143A	VST	0.4	A	60	18		5.0	2.8	4.0	60	250	50 M	7/-
★1N5144		1N5144	VST	0.4	A	60	22		10	3.2	4.0	60	200	50 M	7/-
★1N5144A		1N5144A	VST	0.4	A	60	22		5.0	3.2	4.0	60	200	50 M	7/-
★1N5145		1N5145	VST	0.4	A	60	27		10	3.2	4.0	60	200	50 M	7/-
★1N5145A		1N5145A	VST	0.4	A	60	27		5.0	3.2	4.0	60	200	50 M	7/-
★1N5146		1N5146	VST	0.4	A	60	33		10	3.2	4.0	60	200	50 M	7/-
★1N5146A		1N5146A	VST	0.4	A	60	33		5.0	3.2	4.0	60	200	50 M	7/-
★1N5147		1N5147	VST	0.4	A	60	39		10	3.2	4.0	60	200	50 M	7/-
★1N5147A		1N5147A	VST	0.4	A	60	39		5.0	3.2	4.0	60	200	50 M	7/-
★1N5148		1N5148	VST	0.4	A	60	47		10	3.2	4.0	60	200	50 M	7/-
★1N5148A		1N5148A	VST	0.4	A	60	47		5.0	3.2	4.0	60	200	50 M	7/-
★1N5149		1N5149	VSP	14	C	80	12.5	6.0	60	*2*		*55*	*11*	1000 M	-/47
★1N5150		1N5149	VSP	19	C	80	12.5	6.0	60	*2*		*65*		1000 M	-/47
★1N5150A		1N5150A	VSP	29	C	80	12	6.0	10	*2*		*68*	*24*	1000 M	-/47
★1N5151		1N5151	VSP	7.5	C	75	6.3	6.0	19	*2*		*50*	*6*	200 M	-/48
★1N5152		1N5151	VSP	7.5	C	75	6.3	6.0	19	*2*		*50*	*6*	200 M	-/46
★1N5152A		1N5150A	VSP	11.7	C	75	6.0	6.0	10	*2*		*60*	*7.2*	2000 M	-/46
★1N5153		1N5151	VSP	7.5	C	75	6.3	6.0	19	*2*		*50*	*6*	200 M	-/47
★1N5153A		1N5150A	VSP	11.7	C	75	6.0	6.0	10	*2*		*60*	*7.2*	2000 M	-/47
★1N5154		1N5154	VSP	5	C	35	2.0	6.0	50	*3*		*40*	*2*	6000 M	-/48
★1N5155		1N5154	VSP	5	C	35	2.0	6.0	50	*3*		*40*	*2*	6000 M	-/46
★1N5155A		1N5150A	VSP	8.8	C	35	1.9	6.0	10	*3*		*40*	*2.0*	6000 M	-/46
★1N5156		1N5156	VSP	4.5	C	20	0.8	6.0	25	*2*		*38.5*		10 G	-/48
★1N5157		1N5156	VSP	4.5	C	20	0.8	6.0	25	*2*		*38.5*		10 G	-/46
1N5421			VST	0.25	A	210	210	4.0	20	4.1	4.0	100	200	25 M	-/-
1N5422			VST	0.25	A	210	340	4.0	20	4.1	4.0	100	200	25 M	-/-
1N5423			VST	0.25	A	210	680	4.0	20	4.1	4.0	100	150	25 M	-/-
1N5424			VST	0.25	A	115	680	4.0	20	4.2	4.0	100	300	10 M	-/-
1N5425			VST	0.25	A	115	1370	4.0	20	4.2	4.0	100	200	10 M	-/-
1N5439			VST	0.4	A	30	3.3	4.0	20	2.3	2.0	30	450	50 M	7/51
1N5439A			VST	0.4	A	30	3.3	4.0	10	2.3	2.0	30	450	50 M	7/51

TYPE NO.	REPLACEMENT	REFERENCE	ID	P_D Watts	REF. POINT	V_R Max	C_T pF nom	@ V_R Volts	Tolerance %	C_1/C_2 f_{out}/f_{in}	V_1 Volts -	V_2 Volts η %	Q P_{out} Watts Min.	f	PACKAGE To- No.	Case No.
1N5439B			VST	0.4	A	30	3.3	4.0	5.0	2.3	2.0	30	450	50 M	7/51	
1N5439C			VST	0.4	A	30	3.3	4.0	2.0	2.3	2.0	30	450	50 M	7/51	
1N5439D			VST	0.4	A	30	3.3	4.0	1.0	2.3	2.0	30	450	50 M	7/51	
1N5440			VST	0.4	A	30	4.7	4.0	20	2.4	2.0	30	450	50 M	7/51	
1N5440A			VST	0.4	A	30	4.7	4.0	10	2.4	2.0	30	450	50 M	7/51	
1N5440B			VST	0.4	A	30	4.7	4.0	5.0	2.4	2.0	30	450	50 M	7/51	
1N5440C			VST	0.4	A	30	4.7	4.0	2.0	2.4	2.0	30	450	50 M	7/51	
1N5440D			VST	0.4	A	30	4.7	4.0	1.0	2.4	2.0	30	450	50 M	7/51	
★1N5441		1N5441A	VST	0.4	A	30	6.8	4.0	20	2.5	2.0	30	450	50 M	7/51	
★1N5441A		1N5441A	VST	0.4	A	30	6.8	4.0	10	2.5	2.0	30	450	50 M	7/51	
★1N5441B		1N5441A	VST	0.4	A	30	6.8	4.0	5.0	2.5	2.0	30	450	50 M	7/51	
★1N5441C		1N5441A	VST	0.4	A	30	6.8	4.0	2.0	2.5	2.0	30	450	50 M	7/51	
★1N5441D		1N5441A	VST	0.4	A	30	6.8	4.0	1.0	2.5	2.0	30	450	50 M	7/51	
1N5442		1N5441A	VST	0.4	A	30	8.2	4.0	20	2.5	2.0	30	450	50 M	7/51	
★1N5442A		1N5441A	VST	0.4	A	30	8.2	4.0	10	2.5	2.0	30	450	50 M	7/51	
★1N5442B		1N5441A	VST	0.4	A	30	8.2	4.0	5.0	2.5	2.0	30	450	50 M	7/51	
★1N5442C		1N5441A	VST	0.4	A	30	8.2	4.0	2.0	2.5	2.0	30	450	50 M	7/51	
★1N5442D		1N5441A	VST	0.4	A	30	8.2	4.0	1.0	2.5	2.0	30	450	50 M	7/51	
1N5443		1N5441A	VST	0.4	A	30	10	4.0	20	2.6	2.0	30	400	50 M	7/51	
★1N5443A		1N5441A	VST	0.4	A	30	10	4.0	10	2.6	2.0	30	400	50 M	7/51	
★1N5443B		1N5441A	VST	0.4	A	30	10	4.0	5.0	2.6	2.0	30	400	50 M	7/51	
★1N5443C		1N5441A	VST	0.4	A	30	10	4.0	2.0	2.6	2.0	30	400	50 M	7/51	
★1N5443D		1N5441A	VST	0.4	A	30	10	4.0	1.0	2.6	2.0	30	400	50 M	7/51	
1N5444		1N5441A	VST	0.4	A	30	12	4.0	20	2.6	2.0	30	400	50 M	7/51	
★1N5444A		1N5441A	VST	0.4	A	30	12	4.0	10	2.6	2.0	30	400	50 M	7/51	
★1N5444B		1N5441A	VST	0.4	A	30	12	4.0	5.0	2.6	2.0	30	400	50 M	7/51	
★1N5444C		1N5441A	VST	0.4	A	30	12	4.0	2.0	2.6	2.0	30	400	50 M	7/51	
★1N5444D		1N5441A	VST	0.4	A	30	12	4.0	1.0	2.6	2.0	30	400	50 M	7/51	
★1N5445			VST	0.4	A	30	15	4.0	20	2.6	2.0	30	400	50 M	7/51	
★1N5445A		1N5441A	VST	0.4	A	30	15	4.0	10	2.6	2.0	30	400	50 M	7/51	
★1N5445B		1N5441A	VST	0.4	A	30	15	4.0	5.0	2.6	2.0	30	400	50 M	7/51	
★1N5445C		1N5441A	VST	0.4	A	30	15	4.0	2.0	2.6	2.0	30	400	50 M	7/51	
★1N5445D		1N5441A	VST	0.4	A	30	15	4.0	1.0	2.6	2.0	30	400	50 M	7/51	
★1N5446			VST	0.4	A	30	18	4.0	20	2.6	2.0	30	350	50 M	7/51	
★1N5446A		1N5441A	VST	0.4	A	30	18	4.0	10	2.6	2.0	30	350	50 M	7/51	
★1N5446B		1N5441A	VST	0.4	A	30	18	4.0	5.0	2.6	2.0	30	350	50 M	7/51	
★1N5446C		1N5441A	VST	0.4	A	30	18	4.0	2.0	2.6	2.0	30	350	50 M	7/51	
★1N5446D		1N5441A	VST	0.4	A	30	18	4.0	1.0	2.6	2.0	30	350	50 M	7/51	
★1N5447			VST	0.4	A	30	20	4.0	20	2.6	2.0	30	350	50 M	7/51	
★1N5447A		1N5441A	VST	0.4	A	30	20	4.0	10	2.6	2.0	30	350	50 M	7/51	
★1N5447B		1N5441A	VST	0.4	A	30	20	4.0	5.0	2.6	2.0	30	350	50 M	7/51	
★1N5447C		1N5441A	VST	0.4	A	30	20	4.0	2.0	2.6	2.0	30	350	50 M	7/51	
★1N5447D		1N5441A	VST	0.4	A	30	20	4.0	1.0	2.6	2.0	30	350	50 M	7/51	
★1N5448			VST	0.4	A	30	22	4.0	20	2.6	2.0	30	350	50 M	7/51	
★1N5448A		1N5441A	VST	0.4	A	30	22	4.0	10	2.6	2.0	30	350	50 M	7/51	
★1N5448B		1N5441A	VST	0.4	A	30	22	4.0	5.0	2.6	2.0	30	350	50 M	7/51	
★1N5448C		1N5441A	VST	0.4	A	30	22	4.0	2.0	2.6	2.0	30	350	50 M	7/51	
★1N5448D		1N5441A	VST	0.4	A	30	22	4.0	1.0	2.6	2.0	30	350	50 M	7/51	
★1N5449			VST	0.4	A	30	27	4.0	20	2.6	2.0	30	350	50 M	7/51	
★1N5449A		1N5441A	VST	0.4	A	30	27	4.0	10	2.6	2.0	30	350	50 M	7/51	
★1N5449B		1N5441A	VST	0.4	A	30	27	4.0	5.0	2.6	2.0	30	350	50 M	7/51	
★1N5449C		1N5441A	VST	0.4	A	30	27	4.0	2.0	2.6	2.0	30	350	50 M	7/51	
★1N5449D		1N5441A	VST	0.4	A	30	27	4.0	1.0	2.6	2.0	30	350	50 M	7/51	
★1N5450			VST	0.4	A	30	33	4.0	20	2.6	2.0	30	350	50 M	7/51	
★1N5450A		1N5441A	VST	0.4	A	30	33	4.0	10	2.6	2.0	30	350	50 M	7/51	
★1N5450B		1N5441A	VST	0.4	A	30	33	4.0	5.0	2.6	2.0	30	350	50 M	7/51	
★1N5450C		1N5441A	VST	0.4	A	30	33	4.0	2.0	2.6	2.0	30	350	50 M	7/51	
★1N5450D		1N5441A	VST	0.4	A	30	33	4.0	1.0	2.6	2.0	30	350	50 M	7/51	
★1N5451			VST	0.4	A	30	39	4.0	20	2.6	2.0	30	300	50 M	7/51	
★1N5451A		1N5441A	VST	0.4	A	30	39	4.0	10	2.6	2.0	30	300	50 M	7/51	
★1N5451B		1N5441A	VST	0.4	A	30	39	4.0	5.0	2.6	2.0	30	300	50 M	7/51	
★1N5451C		1N5441A	VST	0.4	A	30	39	4.0	2.0	2.6	2.0	30	300	50 M	7/51	
★1N5451D		1N5441A	VST	0.4	A	30	39	4.0	1.0	2.6	2.0	30	300	50 M	7/51	
★1N5452			VST	0.4	A	30	47	4.0	20	2.6	2.0	30	250	50 M	7/51	
★1N5452A		1N5441A	VST	0.4	A	30	47	4.0	10	2.6	2.0	30	250	50 M	7/51	
★1N5452B		1N5441A	VST	0.4	A	30	47	4.0	5.0	2.6	2.0	30	250	50 M	7/51	
★1N5452C		1N5441A	VST	0.4	A	30	47	4.0	2.0	2.6	2.0	30	250	50 M	7/51	
★1N5452D		1N5441A	VST	0.4	A	30	47	4.0	1.0	2.6	2.0	30	250	50 M	7/51	
★1N5453			VST	0.4	A	30	56	4.0	20	2.6	2.0	30	200	50 M	7/51	
★1N5453A		1N5441A	VST	0.4	A	30	56	4.0	10	2.6	2.0	30	200	50 M	7/51	

TYPE NO.	REPLACEMENT	REFERENCE	ID	P_D Watts	REF. POINT	V_R Max	C_T pF nom	@ V_R Volts	Tolerance %	C_1/C_2 f_{out}/f_{in}	V_1 Volts	V_2 Volts η %	Q P_{out} Watts Min.	f	PACKAGE To-No.	Case No.
★1N5453B		1N5441A	VST	0.4	A	30	56	4.0	5.0	2.6	2.0	30	200	50 M	7/51	
★1N5453C		1N5441A	VST	0.4	A	30	56	4.0	2.0	2.6	2.0	30	200	50 M	7/51	
★1N5453D		1N5441A	VST	0.4	A	30	56	4.0	1.0	2.6	2.0	30	200	50 M	7/51	
★1N5454			VST	0.4	A	30	68	4.0	20	2.7	2.0	30	175	50 M	7/51	
★1N5454A		1N5441A	VST	0.4	A	30	68	4.0	10	2.7	2.0	30	175	50 M	7/51	
★1N5454B		1N5441A	VST	0.4	A	30	68	4.0	5.0	2.7	2.0	30	175	50 M	7/51	
★1N5454C		1N5441A	VST	0.4	A	30	68	4.0	2.0	2.7	2.0	30	175	50 M	7/51	
★1N5454D		1N5441A	VST	0.4	A	30	68	4.0	1.0	2.7	2.0	30	175	50 M	7/51	
★1N5455			VST	0.4	A	30	82	4.0	20	2.7	2.0	30	175	50 M	7/51	
★1N5455A		1N5441A	VST	0.4	A	30	82	4.0	10	2.7	2.0	30	175	50 M	7/51	
★1N5455B		1N5441A	VST	0.4	A	30	82	4.0	5.0	2.7	2.0	30	175	50 M	7/51	
★1N5455C		1N5441A	VST	0.4	A	30	82	4.0	2.0	2.7	2.0	30	175	50 M	7/51	
★1N5455D		1N5441A	VST	0.4	A	30	82	4.0	1.0	2.7	2.0	30	175	50 M	7/51	
★1N5456			VST	0.4	A	30	100	4.0	20	2.7	2.0	30	175	50 M	7/51	
★1N5456A		1N5441A	VST	0.4	A	30	100	4.0	10	2.7	2.0	30	175	50 M	7/51	
★1N5456B		1N5441A	VST	0.4	A	30	100	4.0	5.0	2.7	2.0	30	175	50 M	7/51	
★1N5456C		1N5441A	VST	0.4	A	30	100	4.0	2.0	2.7	2.0	30	175	50 M	7/51	
★1N5456D		1N5441A	VST	0.4	A	30	100	4.0	1.0	2.7	2.0	30	175	50 M	7/51	
★1N5457			VST	0.4	A	30	120	4.0	20	2.7	2.0	30	150	50 M	7/51	
★1N5457A			VST	0.4	A	30	120	4.0	10	2.7	2.0	30	150	50 M	7/51	
★1N5457B			VST	0.4	A	30	120	4.0	5.0	2.7	2.0	30	150	50 M	7/51	
1N5457C			VST	0.4	A	30	120	4.0	2.0	2.7	2.0	30	150	50 M	7/51	
1N5457D			VST	0.4	A	30	120	4.0	1.0	2.7	2.0	30	150	50 M	7/51	
1N5458			VST	0.4	A	30	3.9	4.0	20	2.5	2.0	30	600	50 M	7/51	
1N5458A			VST	0.4	A	30	3.9	4.0	10	2.5	2.0	30	600	50 M	7/51	
1N5458B			VST	0.4	A	30	3.9	4.0	5.0	2.5	2.0	30	600	50 M	7/51	
1N5458C			VST	0.4	A	30	3.9	4.0	2.0	2.5	2.0	30	600	50 M	7/51	
1N5458D			VST	0.4	A	30	3.9	4.0	1.0	2.5	2.0	30	600	50 M	7/51	
1N5459			VST	0.4	A	30	4.7	4.0	20	2.6	2.0	30	600	50 M	7/51	
1N5459A			VST	0.4	A	30	4.7	4.0	10	2.6	2.0	30	600	50 M	7/51	
1N5459B			VST	0.4	A	30	4.7	4.0	5.0	2.6	2.0	30	600	50 M	7/51	
1N5459C			VST	0.4	A	30	4.7	4.0	2.0	2.6	2.0	30	600	50 M	7/51	
1N5459D			VST	0.4	A	30	4.7	4.0	1.0	2.6	2.0	30	600	50 M	7/51	
1N5460			VST	0.4	A	30	5.6	4.0	20	2.6	2.0	30	600	50 M	7/51	
1N5460A			VST	0.4	A	30	5.6	4.0	10	2.6	2.0	30	600	50 M	7/51	
1N5460B			VST	0.4	A	30	5.6	4.0	5.0	2.6	2.0	30	600	50 M	7/51	
1N5460C			VST	0.4	A	30	5.6	4.0	2.0	2.6	2.0	30	600	50 M	7/51	
1N5460D			VST	0.4	A	30	5.6	4.0	1.0	2.6	2.0	30	600	50 M	7/51	
1N5461			VST	0.4	A	30	6.8	4.0	20	2.7	2.0	30	600	50 M	7/51	
★1N5461A		1N5461A	VST	0.4	A	30	6.8	4.0	10	2.7	2.0	30	600	50 M	7/51	
★1N5461B		1N5461A	VST	0.4	A	30	6.8	4.0	5.0	2.7	2.0	30	600	50 M	7/51	
★1N5461C		1N5461A	VST	0.4	A	30	6.8	4.0	2.0	2.7	2.0	30	600	50 M	7/51	
★1N5461D		1N5461A	VST	0.4	A	30	6.8	4.0	1.0	2.7	2.0	30	600	50 M	7/51	
★1N5462			VST	0.4	A	30	8.2	4.0	20	2.8	2.0	30	600	50 M	7/51	
★1N5462A		1N5461A	VST	0.4	A	30	8.2	4.0	10	2.8	2.0	30	600	50 M	7/51	
★1N5462B		1N5461A	VST	0.4	A	30	8.2	4.0	5.0	2.8	2.0	30	600	50 M	7/51	
★1N5462C		1N5461A	VST	0.4	A	30	8.2	4.0	2.0	2.8	2.0	30	600	50 M	7/51	
★1N5462D		1N5461A	VST	0.4	A	30	8.2	4.0	1.0	2.8	2.0	30	600	50 M	7/51	
★1N5463			VST	0.4	A	30	10	4.0	20	2.8	2.0	30	550	50 M	7/51	
★1N5463A		1N5461A	VST	0.4	A	30	10	4.0	10	2.8	2.0	30	550	50 M	7/51	
★1N5463B		1N5461A	VST	0.4	A	30	10	4.0	5.0	2.8	2.0	30	550	50 M	7/51	
★1N5463C		1N5461A	VST	0.4	A	30	10	4.0	2.0	2.8	2.0	30	550	50 M	7/51	
★1N5463D		1N5461A	VST	0.4	A	30	10	4.0	1.0	2.8	2.0	30	550	50 M	7/51	
★1N5464			VST	0.4	A	30	12	4.0	20	2.8	2.0	30	550	50 M	7/51	
★1N5464A		1N5461A	VST	0.4	A	30	12	4.0	10	2.8	2.0	30	550	50 M	7/51	
★1N5464B		1N5461A	VST	0.4	A	30	12	4.0	5.0	2.8	2.0	30	550	50 M	7/51	
★1N5464C		1N5461A	VST	0.4	A	30	12	4.0	2.0	2.8	2.0	30	550	50 M	7/51	
★1N5464D		1N5461A	VST	0.4	A	30	12	4.0	1.0	2.8	2.0	30	550	50 M	7/51	
★1N5465			VST	0.4	A	30	15	4.0	20	2.8	2.0	30	550	50 M	7/51	
★1N5465A		1N5461A	VST	0.4	A	30	15	4.0	10	2.8	2.0	30	550	50 M	7/51	
★1N5465B		1N5461A	VST	0.4	A	30	15	4.0	5.0	2.8	2.0	30	550	50 M	7/51	
★1N5465C		1N5461A	VST	0.4	A	30	15	4.0	2.0	2.8	2.0	30	550	50 M	7/51	
★1N5465D		1N5461A	VST	0.4	A	30	15	4.0	1.0	2.8	2.0	30	550	50 M	7/51	
★1N5466			VST	0.4	A	30	18	4.0	20	2.9	2.0	30	500	50 M	7/51	
★1N5466A		1N5461A	VST	0.4	A	30	18	4.0	10	2.9	2.0	30	500	50 M	7/51	
★1N5466B		1N5461A	VST	0.4	A	30	18	4.0	5.0	2.9	2.0	30	500	50 M	7/51	
★1N5466C		1N5461A	VST	0.4	A	30	18	4.0	2.0	2.9	2.0	30	500	50 M	7/51	
★1N5466D		1N5461A	VST	0.4	A	30	18	4.0	1.0	2.9	2.0	30	500	50 M	7/51	
★1N5467			VST	0.4	A	30	20	4.0	20	2.9	2.0	30	500	50 M	7/51	
★1N5467A		1N5461A	VST	0.4	A	30	20	4.0	10	2.9	2.0	30	500	50 M	7/51	

TYPE NO.	REPLACEMENT	REFERENCE	ID	P_D Watts	REF. POINT	V_R Max	C_T pF nom	@ V_R Volts	Tolerance %	C_1/C_2 f_{out}/f_{in}	V_1 Volts -	V_2 Volts η %	Q P_{out} Watts Min.	f	PACKAGE To-Case No. No.
★1N5467B		1N5461A	VST	0.4	A	30	20	4.0	5.0	2.9	2.0	30	500	50 M	7/51
★1N5467C		1N5461A	VST	0.4	A	30	20	4.0	2.0	2.9	2.0	30	500	50 M	7/51
★1N5467D		1N5461A	VST	0.4	A	30	20	4.0	1.0	2.9	2.0	30	500	50 M	7/51
1N5468			VST	0.4	A	30	22	4.0	20	2.9	2.0	30	500	50 M	7/51
★1N5468A		1N5461A	VST	0.4	A	30	22	4.0	10	2.9	2.0	30	500	50 M	7/51
★1N5468B		1N5461A	VST	0.4	A	30	22	4.0	5.0	2.9	2.0	30	500	50 M	7/51
★1N5468C		1N5461A	VST	0.4	A	30	22	4.0	2.0	2.9	2.0	30	500	50 M	7/51
★1N5468D		1N5461A	VST	0.4	A	30	22	4.0	1.0	2.9	2.0	30	500	50 M	7/51
★1N5469			VST	0.4	A	30	27	4.0	20	2.9	2.0	30	500	50 M	7/51
★1N5469A		1N5461A	VST	0.4	A	30	27	4.0	10	2.9	2.0	30	500	50 M	7/51
★1N5469B		1N5461A	VST	0.4	A	30	27	4.0	5.0	2.9	2.0	30	500	50 M	7/51
★1N5469C		1N5461A	VST	0.4	A	30	27	4.0	2.0	2.9	2.0	30	500	50 M	7/51
★1N5469D		1N5461A	VST	0.4	A	30	27	4.0	1.0	2.9	2.0	30	500	50 M	7/51
★1N5470			VST	0.4	A	30	33	4.0	20	2.9	2.0	30	500	50 M	7/51
★1N5470A		1N5461A	VST	0.4	A	30	33	4.0	10	2.9	2.0	30	500	50 M	7/51
★1N5470B		1N5461A	VST	0.4	A	30	33	4.0	5.0	2.9	2.0	30	500	50 M	7/51
★1N5470C		1N5461A	VST	0.4	A	30	33	4.0	2.0	2.9	2.0	30	500	50 M	7/51
★1N5470D		1N5461A	VST	0.4	A	30	33	4.0	1.0	2.9	2.0	30	500	50 M	7/51
★1N5471			VST	0.4	A	30	39	4.0	20	2.9	2.0	30	450	50 M	7/51
★1N5471A		1N5461A	VST	0.4	A	30	39	4.0	10	2.9	2.0	30	450	50 M	7/51
★1N5471B		1N5461A	VST	0.4	A	30	39	4.0	5.0	2.9	2.0	30	450	50 M	7/51
★1N5471C		1N5461A	VST	0.4	A	30	39	4.0	2.0	2.9	2.0	30	450	50 M	7/51
★1N5471D		1N5461A	VST	0.4	A	30	39	4.0	1.0	2.9	2.0	30	450	50 M	7/51
★1N5472			VST	0.4	A	30	47	4.0	20	2.9	2.0	30	400	50 M	7/51
★1N5472A		1N5461A	VST	0.4	A	30	47	4.0	10	2.9	2.0	30	400	50 M	7/51
★1N5472B		1N5461A	VST	0.4	A	30	47	4.0	5.0	2.9	2.0	30	400	50 M	7/51
★1N5472C		1N5461A	VST	0.4	A	30	47	4.0	2.0	2.9	2.0	30	400	50 M	7/51
★1N5472D		1N5461A	VST	0.4	A	30	47	4.0	1.0	2.9	2.0	30	400	50 M	7/51
★1N5473			VST	0.4	A	30	56	4.0	20	2.9	2.0	30	300	50 M	7/51
★1N5473A		1N5461A	VST	0.4	A	30	56	4.0	10	2.9	2.0	30	300	50 M	7/51
★1N5473B		1N5461A	VST	0.4	A	30	56	4.0	5.0	2.9	2.0	30	300	50 M	7/51
★1N5473C		1N5461A	VST	0.4	A	30	56	4.0	2.0	2.9	2.0	30	300	50 M	7/51
★1N5473D		1N5461A	VST	0.4	A	30	56	4.0	1.0	2.9	2.0	30	300	50 M	7/51
★1N5474			VST	0.4	A	30	68	4.0	20	2.9	2.0	30	250	50 M	7/51
★1N5474A		1N5461A	VST	0.4	A	30	68	4.0	10	2.9	2.0	30	250	50 M	7/51
★1N5474B		1N5461A	VST	0.4	A	30	68	4.0	5.0	2.9	2.0	30	250	50 M	7/51
★1N5474C		1N5461A	VST	0.4	A	30	68	4.0	2.0	2.9	2.0	30	250	50 M	7/51
★1N5474D		1N5461A	VST	0.4	A	30	68	4.0	1.0	2.9	2.0	30	250	50 M	7/51
★1N5475			VST	0.4	A	30	82	4.0	20	2.9	2.0	30	225	50 M	7/51
★1N5475A		1N5461A	VST	0.4	A	30	82	4.0	10	2.9	2.0	30	225	50 M	7/51
★1N5475B		1N5461A	VST	0.4	A	30	82	4.0	5.0	2.9	2.0	30	225	50 M	7/51
★1N5475C		1N5461A	VST	0.4	A	30	82	4.0	2.0	2.9	2.0	30	225	50 M	7/51
★1N5475D		1N5461A	VST	0.4	A	30	82	4.0	1.0	2.9	2.0	30	225	50 M	7/51
1N5476			VST	0.4	A	30	100	4.0	20	2.9	2.0	30	200	50 M	7/51
★1N5476A		1N5461A	VST	0.4	A	30	100	4.0	10	2.9	2.0	30	200	50 M	7/51
★1N5476B		1N5461A	VST	0.4	A	30	100	4.0	5.0	2.9	2.0	30	200	50 M	7/51
★1N5476C		1N5461A	VST	0.4	A	30	100	4.0	2.0	2.9	2.0	30	200	50 M	7/51
★1N5476D		1N5461A	VST	0.4	A	30	100	4.0	1.0	2.9	2.0	30	200	50 M	7/-
1N5681	1N5461A	1N5461A	VST	0.4	A	45	6.8	4.0	20	3.1	4.0	40	600	50 M	7/-
1N5681A	1N5461A	1N5461A	VST	0.4	A	45	6.8	4.0	10	3.1	4.0	40	600	50 M	7/-
1N5681B	1N5461B	1N5461A	VST	0.4	A	45	6.8	4.0	5.0	3.1	4.0	40	600	50 M	7/-
1N5682	1N5462A	1N5461A	VST	0.4	A	45	8.2	4.0	20	3.1	4.0	40	600	50 M	7/-
1N5682A	1N5462A	1N5461A	VST	0.4	A	45	8.2	4.0	10	3.1	4.0	40	600	50 M	7/-
1N5682B	1N5462B	1N5461A	VST	0.4	A	45	8.2	4.0	5.0	3.1	4.0	40	600	50 M	7/-
1N5683	1N5463A	1N5461A	VST	0.4	A	45	10	4.0	20	3.2	4.0	40	550	50 M	7/-
1N5683A	1N5463A	1N5461A	VST	0.4	A	45	10	4.0	10	3.2	4.0	40	550	50 M	7/-
1N5683B	1N5463B	1N5461A	VST	0.4	A	45	10	4.0	5.0	3.2	4.0	40	550	50 M	7/-
1N5684	1N5464A	1N5461A	VST	0.4	A	45	12	4.0	20	3.2	4.0	40	550	50 M	7/-
1N5684A	1N5464A	1N5461A	VST	0.4	A	45	12	4.0	10	3.2	4.0	40	550	50 M	7/-
1N5684B	1N5464B	1N5461A	VST	0.4	A	45	12	4.0	5.0	3.2	4.0	40	550	50 M	7/-
1N5685	1N5465A	1N5461A	VST	0.4	A	45	15	4.0	20	3.2	4.0	40	550	50 M	7/-
1N5685A	1N5465A	1N5461A	VST	0.4	A	45	15	4.0	10	3.2	4.0	40	550	50 M	7/-
1N5685B	1N5465B	1N5461A	VST	0.4	A	45	15	4.0	5.0	3.2	4.0	40	550	50 M	7/-
1N5686			VST	0.4	A	45	18	4.0	20	3.2	4.0	40	500	50 M	7/-
1N5686A			VST	0.4	A	45	18	4.0	10	3.2	4.0	40	500	50 M	7/-
1N5686B			VST	0.4	A	45	18	4.0	5.0	3.2	4.0	40	500	50 M	7/-
1N5687			VST	0.4	A	45	22	4.0	20	3.3	4.0	40	500	50 M	7/-
1N5687A			VST	0.4	A	45	22	4.0	10	3.3	4.0	40	500	50 M	7/-
1N5687B			VST	0.4	A	45	22	4.0	5.0	3.3	4.0	40	500	50 M	7/-
1N5688	1N5469A	1N5461A	VST	0.4	A	45	27	4.0	20	3.3	4.0	40	500	50 M	7/-

TYPE NO.	REPLACEMENT	REFERENCE	ID	P_D Watts	REF. POINT	V_R Max	C_T pF nom	@ V_R Volts	Tolerance %	C_1/C_2 f_{out}/f_{in}	V_1 Volts	V_2 Volts η %	Q P_{out} Watts Min.	f	PACKAGE To-No.	Case No.
1N5688A	1N5469A	1N5461A	VST	0.4	A	45	27	4.0	10	3.3	4.0	40	500	50 M	7/-	
1N5688B	1N5469B	1N5461A	VST	0.4	A	45	27	4.0	5.0	3.3	4.0	40	500	50 M	7/-	
1N5689	1N5470A	1N5461A	VST	0.4	A	45	33	4.0	20	3.3	4.0	40	500	50 M	7/-	
1N5689A	1N5470A	1N5461A	VST	0.4	A	45	33	4.0	10	3.3	4.0	40	500	50 M	7/-	
1N5689B	1N5470B	1N5461A	VST	0.4	A	45	33	4.0	5.0	3.3	4.0	40	500	50 M	7/-	
1N5690	1N5471A	1N5461A	VST	0.4	A	45	39	4.0	20	3.3	4.0	40	450	50 M	7/-	
1N5690A	1N5471A	1N5461A	VST	0.4	A	45	39	4.0	10	3.3	4.0	40	450	50 M	7/-	
1N5690B	1N5471B	1N5461A	VST	0.4	A	45	39	4.0	5.0	3.3	4.0	40	450	50 M	7/-	
1N5691	1N5472A	1N5461A	VST	0.4	A	45	47	4.0	20	3.3	4.0	40	400	50 M	7/-	
1N5691A	1N5472A	1N5461A	VST	0.4	A	45	47	4.0	10	3.3	4.0	40	400	50 M	7/-	
1N5691B	1N5472B	1N5461A	VST	0.4	A	45	47	4.0	5.0	3.3	4.0	40	400	50 M	7/-	
1N5692	1N5473A	1N5461A	VST	0.4	A	45	56	4.0	20	3.3	4.0	40	300	50 M	7/-	
1N5692A	1N5473A	1N5461A	VST	0.4	A	45	56	4.0	10	3.3	4.0	40	300	50 M	7/-	
1N5692B	1N5473B	1N5461A	VST	0.4	A	45	56	4.0	5.0	3.3	4.0	40	300	50 M	7/-	
1N5693	1N5474A	1N5461A	VST	0.4	A	45	68	4.0	20	3.3	4.0	40	250	50 M	7/-	
1N5693A	1N5474A	1N5461A	VST	0.4	A	45	68	4.0	10	3.3	4.0	40	250	50 M	7/-	
1N5693B	1N5474B	1N5461A	VST	0.4	A	45	68	4.0	5.0	3.3	4.0	40	250	50 M	7/-	
1N5694	1N5475A	1N5461A	VST	0.4	A	45	82	4.0	20	3.3	4.0	40	225	50 M	7/-	
1N5694A	1N5475A	1N5461A	VST	0.4	A	45	82	4.0	10	3.3	4.0	40	225	50 M	7/-	
1N5694B	1N5475B	1N5461A	VST	0.4	A	45	82	4.0	5.0	3.3	4.0	40	225	50 M	7/-	
1N5695	1N5476A	1N5461A	VST	0.4	A	45	100	4.0	20	3.3	4.0	40	200	50 M	7/-	
1N5695A	1N5476A	1N5461A	VST	0.4	A	45	100	4.0	10	3.3	4.0	40	200	50 M	7/-	
1N5695B	1N5476B	1N5461A	VST	0.4	A	45	100	4.0	5.0	3.3	4.0	40	200	50 M	7/-	
1N5696	1N5461A	1N5461A	VST	0.4	A	65	6.8	4.0	20	2.7	2.0	60	450	50 M	7/-	
1N5696A	1N5461A	1N5461A	VST	0.4	A	65	6.8	4.0	10	2.7	2.0	60	450	50 M	7/-	
1N5696B	1N5461B	1N5461A	VST	0.4	A	65	6.8	4.0	5.0	2.7	2.0	60	450	50 M	7/-	
1N5697	1N5462A	1N5461A	VST	0.4	A	65	8.2	4.0	20	2.7	2.0	60	450	50 M	7/-	
1N5697A	1N5462A	1N5461A	VST	0.4	A	65	8.2	4.0	10	2.7	2.0	60	450	50 M	7/-	
1N5697B	1N5462B	1N5461A	VST	0.4	A	65	8.2	4.0	5.0	2.7	2.0	60	400	50 M	7/-	
1N5698	1N5463A	1N5461A	VST	0.4	A	65	10	4.0	20	2.8	2.0	60	400	50 M	7/-	
1N5698A	1N5463A	1N5461A	VST	0.4	A	65	10	4.0	10	2.8	2.0	60	400	50 M	7/-	
1N5698B	1N5463B	1N5461A	VST	0.4	A	65	10	4.0	5.0	2.8	2.0	60	400	50 M	7/-	
1N5699	1N5464A	1N5461A	VST	0.4	A	65	12	4.0	20	2.8	2.0	60	400	50 M	7/-	
1N5699A	1N5464A	1N5461A	VST	0.4	A	65	12	4.0	10	2.8	2.0	60	400	50 M	7/-	
1N5699B	1N5464B	1N5461A	VST	0.4	A	65	12	4.0	5.0	2.8	2.0	60	400	50 M	7/-	
1N5700	1N5465A	1N5461A	VST	0.4	A	65	15	4.0	20	2.8	2.0	60	400	50 M	7/-	
1N5700A	1N5465A	1N5461A	VST	0.4	A	65	15	4.0	10	2.8	2.0	60	400	50 M	7/-	
1N5700B	1N5465B	1N5461A	VST	0.4	A	65	15	4.0	5.0	2.8	2.0	60	400	50 M	7/-	
1N5701	1N5467A	1N5461A	VST	0.4	A	65	18	4.0	20	2.8	2.0	60	375	50 M	7/-	
1N5701A	1N5467A	1N5461A	VST	0.4	A	65	18	4.0	10	2.8	2.0	60	375	50 M	7/-	
1N5701B	1N5467B	1N5461A	VST	0.4	A	65	18	4.0	5.0	2.8	2.0	60	375	50 M	7/-	
1N5702	1N5468A	1N5461A	VST	0.4	A	65	22	4.0	20	3.2	2.0	60	375	50 M	7/-	
1N5702A	1N5468A	1N5461A	VST	0.4	A	65	22	4.0	10	3.2	2.0	50	375	50 M	7/-	
1N5702B	1N5468B	1N5461A	VST	0.4	A	65	22	4.0	5.0	3.2	2.0	60	375	50 M	7/-	
1N5703	1N5469A	1N5461A	VST	0.4	A	65	27	4.0	20	3.2	2.0	60	350	50 M	7/-	
1N5703A	1N5469A	1N5461A	VST	0.4	A	65	27	4.0	10	3.2	2.0	60	350	50 M	7/-	
1N5703B	1N5469B	1N5461A	VST	0.4	A	65	27	4.0	5.0	3.2	2.0	60	350	50 M	7/-	
1N5704	1N5470A	1N5461A	VST	0.4	A	65	33	4.0	20	3.2	2.0	60	350	50 M	7/-	
1N5704A	1N5470A	1N5461A	VST	0.4	A	65	33	4.0	10	3.2	2.0	60	350	50 M	7/-	
1N5704B	1N5470B	1N5461A	VST	0.4	A	65	33	4.0	5.0	3.2	2.0	60	350	50 M	7/-	
1N5705	1N5471A	1N5461A	VST	0.4	A	65	39	4.0	20	3.2	2.0	60	325	50 M	7/-	
1N5705A	1N5471A	1N5461A	VST	0.4	A	65	39	4.0	10	3.2	2.0	60	325	50 M	7/-	
1N5705B	1N5471B	1N5461A	VST	0.4	A	65	39	4.0	5.0	3.2	2.0	60	325	50 M	7/-	
1N5706	1N5472A	1N5461A	VST	0.4	A	65	47	4.0	20	3.2	2.0	60	300	50 M	7/-	
1N5706A	1N5472A	1N5461A	VST	0.4	A	65	47	4.0	10	3.2	2.0	60	300	50 M	7/-	
1N5706B	1N5472B	1N5461A	VST	0.4	A	65	47	4.0	5.0	3.2	2.0	60	300	50 M	7/-	
1N5707	1N5473A	1N5461A	VST	0.4	A	65	56	4.0	20	3.2	2.0	60	225	50 M	7/-	
1N5707A	1N5473A	1N5461A	VST	0.4	A	65	56	4.0	10	3.2	2.0	60	225	50 M	7/-	
1N5707B	1N5473B	1N5461A	VST	0.4	A	65	56	4.0	5.0	3.2	2.0	60	225	50 M	7/-	
1N5708	1N5474A	1N5461A	VST	0.4	A	65	68	4.0	20	3.2	2.0	60	175	50 M	7/-	
1N5708A	1N5474A	1N5461A	VST	0.4	A	65	68	4.0	10	3.2	2.0	60	175	50 M	7/-	
1N5708B	1N5474B	1N5461A	VST	0.4	A	65	68	4.0	5.0	3.2	2.0	60	175	50 M	7/-	
1N5709	1N5475A	1N5461A	VST	0.4	A	65	82	4.0	20	3.2	2.0	60	150	50 M	7/-	
1N5709A	1N5475A	1N5461A	VST	0.4	A	65	82	4.0	10	3.2	2.0	60	150	50 M	7/-	
1N5709B	1N5475B	1N5461A	VST	0.4	A	65	82	4.0	5.0	3.2	2.0	60	150	50 M	7/-	
1N5710	1N5476A	1N5461A	VST	0.4	A	65	100	4.0	20	3.2	2.0	60	150	50 M	7/-	
1N5710A	1N5476A	1N5461A	VST	0.4	A	65	100	4.0	10	3.2	2.0	60	150	50 M	7/-	
1N5710B	1N5476B	1N5461A	VST	0.4	A	65	100	4.0	5.0	3.2	2.0	60	150	50 M	7/-	
★BB105A		BB105A	VST	0.4	A	30	2.6	4.0	10	4.0	3.0	25	225	100 M	-/226	
★BB105B		BB105A	VST	0.4	A	30	2.2	25	7	4.5	3.0	25	225	100 M	-/226	

TYPE NO.	REPLACEMENT	REFERENCE	ID	P_D Watts	REF. POINT	V_R Max	C_T pF nom	@ V_R Volts	Tolerance %	C_1/C_2 f_{out}/f_{in}	V_1 Volts -	V_2 Volts η %	Q P_{out} Watts Min.	f	PACKAGE To- No.	Case No.
★BB105G		BB105A	VST	0.4	A	30	2.3	25	22	4.0	3.0	25	150	100 M	-/	226
★MV104		MV104	VST	0.28	A	32	40	25	6	2.5	3.0	30	100	100 M	-/	29
★MV109		MV109	VST	0.4	A	30	29	30	10	5.0	3.0	25	280	50 M	-/	226
★MV209		MV209	VST	0.28	A	30	29	30	10	1.8	3.0	25	200	50 M	-/	182
★MV830		MV830	VST	0.4	A	30	15	30	10	1.8	4.0	25	30	50 M	7/	51
★MV831		MV830	VST	0.4	A	30	18	4.0	10	1.8	4.0	25	25	50 M	7/	51
★MV832		MV830	VST	0.4	A	30	22	4.0	10	1.9	4.0	25	25	50 M	7/	51
★MV833		MV830	VST	0.4	A	30	27	4.0	10	1.9	4.0	25	25	50 M	7/	51
★MV834		MV830	VST	0.4	A	30	33	4.0	10	1.9	4.0	25	20	50 M	7/	51
★MV835		MV830	VST	0.4	A	30	39	4.0	10	1.9	4.0	25	20	50 M	7/	51
★MV836		MV830	VST	0.4	A	30	47	4.0	10	2.0	4.0	25	15	50 M	7/	51
★MV837		MV830	VST	0.4	A	30	56	4.0	10	2.0	4.0	25	15	50 M	7/	51
★MV838		MV830	VST	0.4	A	30	68	4.0	10	2.0	4.0	25	15	50 M	7/	51
★MV839		MV830	VST	0.4	A	30	82	4.0	10	2.0	4.0	25	10	50 M	7/	51
★MV840		MV830	VST	0.4	A	30	100	4.0	10	2.0	4.0	25	10	50 M	7/	51
★MV1401		MV1401	VST	0.4	A	12	550	1.0	15	14	1.0	10	200	100 M	14/	146
★MV1403		MV1401	VST	0.4	A	12	175	2.0	20	10	2.0	10	200	100 M	7/	51
★MV1404		MV1401	VST	0.4	A	12	120	2.0	10	10	2.0	10	200	100 M	7/	51
★MV1405		MV1401	VST	0.4	A	12	250	2.0	20	10	2.0	10	200	100 M	7/	51
★MV1620		MV1620	VST	0.4	A	20	6.8	4.0	10	2.0	4.0	20	300	50 M	7/	51
★MV1622		MV1620	VST	0.4	A	20	8.2	4.0	10	2.0	2.0	20	300	50 M	7/	51
★MV1624		MV1620	VST	0.4	A	20	10	4.0	10	2.0	2.0	20	300	50 M	7/	51
★MV1626		MV1620	VST	0.4	A	20	12	4.0	10	2.0	2.0	20	300	50 M	7/	51
★MV1628		MV1620	VST	0.4	A	20	15	4.0	10	2.0	2.0	20	250	50 M	7/	51
★MV1630		MV1620	VST	0.4	A	20	18	4.0	10	2.0	2.0	20	250	50 M	7/	51
★MV1632		MV1620	VST	0.4	A	20	20	4.0	10	2.0	2.0	20	250	50 M	7/	51
★MV1634		MV1620	VST	0.4	A	20	22	4.0	10	2.0	2.0	20	250	50 M	7/	51
★MV1636		MV1620	VST	0.4	A	20	27	4.0	10	2.0	2.0	20	200	50 M	7/	51
★MV1638		MV1620	VST	0.4	A	20	33	4.0	10	2.0	2.0	20	200	50 M	7/	51
★MV1640		MV1620	VST	0.4	A	20	39	4.0	10	2.0	2.0	20	200	50 M	7/	51
★MV1642		MV1620	VST	0.4	A	20	47	4.0	10	2.0	2.0	20	200	50 M	7/	51
★MV1644		MV1620	VST	0.4	A	20	56	4.0	10	2.0	2.0	20	150	50 M	7/	51
★MV1646		MV1620	VST	0.4	A	20	68	4.0	10	2.0	2.0	20	150	50 M	7/	51
★MV1648		MV1620	VST	0.4	A	20	82	4.0	10	2.0	2.0	20	150	50 M	7/	51
★MV1650		MV1620	VST	0.4	A	20	100	4.0	10	2.0	2.0	20	150	50 M	7/	51
★MV1652		MV1652	VST	0.4	A	20	120	4.0	10	2.6*	2.0	20	350	20 M	14/	146
★MV1654		MV1652	VST	0.4	A	20	150	4.0	10	2.6*	2.0	20	250	20 M	14/	146
★MV1656		MV1652	VST	0.4	A	20	180	4.0	10	2.6*	2.0	20	200	20 M	14/	146
★MV1658		MV1652	VST	0.4	A	20	200	4.0	10	2.6*	2.0	20	200	20 M	14/	146
★MV1660		MV1652	VST	0.4	A	20	220	4.0	10	2.6*	2.0	20	150	20 M	14/	146
★MV1662		MV1652	VST	0.4	A	15	250	4.0	10	2.3*	2.0	15	150	20 M	14/	146
★MV1664		MV1652	VST	0.4	A	15	270	4.0	10	2.3*	2.0	15	100	20 M	14/	146
★MV1666		MV1652	VST	5.0	A	15	330	4.0	10	2.3*	2.0	15	100	20 M	14/	146
★MV1804	1N4387	1N4387	VSP	20	C	150	25		40	3		50	15	450	4/	44
★MV1804C			VSP							3		38	15	450	-/	47
★MV1804J	1N4387	1N4387	VSP	20	C					3		50	15	450	4/	44
★MV1805C		MV1805	VSP	18	C	80	25	6.0	20	3		65	26	750	-/	47
★MV1805J			VSP							3		50	26	750	4/	44
★MV1806	1N4388	1N4388	VSP	10	C	100	10		100	2		55	11	1000	4/	44
★MV1806C	1N5149	1N5149	VSP	10	C	80	12.5		60	2		55	11	1000	-/	47
★MV1806J	1N4388		VSP							2		55	11	1000	4/	44
★MV1807C	1N5150	1N5149	VSP	14	C	80	12.5		60	2		65	24	1000	-/	47
★MV1807C1	1N5150	1N5150A	VSP	29.2	C	80	12.0	6.0	10	2		67	25	1000	-/	47
★MV1807C2			VSP							2		67	25	1000	-/	47
★MV1807C3			VSP							2		67	25	1000	-/	47
★MV1807J			VSP							2		64	24	1000	4/	44
★MV1807J1			VSP							2		67	25	1000	4/	44
★MV1808A	1N5151	1N5151	VSP	7.5	C					2		50	6.0	2000	-/	48
★MV1808A1			VSP							2		60	7.2	2000	-/	48
★MV1808B	1N5152	1N5151	VSP	7.5	C					2		60	6.0	2000	-/	46
★MV1808B1	1N5152A	1N5050A	VSP	11.7	C	75	6.0	6.0	10	2		60	7.2	2000	-/	46
★MV1808C	1N5153	1N5151	VSP	7.5	C					2		58	14.5	2000	-/	47
★MV1808C1	1N5153A	1N5150A	VSP	11.7	C	75	6.0	6.0	10	2		67	7.2	2000	-/	47
★MV1808J			VSP							2		50	6.0	2000	4/	44
★MV1808J1			VSP							2		60	7.2	2000	4/	44
★MV1809C		MV1809C	VSP	9.0	C	75	12	6.0	20	2		52	10	2000	-/	47
★MV1809C1		MV1809C	VSP	14	C	75	12		10	2		58	14.5	2000	-/	47
★MV1809J			VSP							2		50	10	2000	4/	44
★MV1809J1			VSP							2		58	14.5	2000	4/	44
★MV1810A	1N5154	1N5154	VSP	3.5	C	35	2.0		50	3		40	2.0	6000	-/	48

TYPE NO.	REPLACEMENT	REFERENCE	ID	P_D Watts / REF. POINT	V_R Max	C_T pF nom @ V_R Volts	Tolerance %	C_1/C_2 f_{out}/f_{in}	V_1 Volts	V_2 Volts η %	Q P_{out} Watts Min.	f	PACKAGE To-No. Case No.
★MV1810A1			VSP					3		40	2.0	6000	-/48
★MV1810B	1N5155	1N5154	VSP	3.5 C	35	2.0	50	3		40	2.0	6000	-/46
★MV1810B1	1N5155A	1N5150A	VSP	8.75 C		1.9 6.0	10	3		40	2.0	6000	-/46
★MV1810B2			VSP					3		40	2.0	6000	-/46
★MV1810B3			VSP					3		40	2.0	6000	-/46
★MV1810D			VSP										
★MV1811A			VSP					2		50	5.0	4000	-/48
★MV1811A1			VSP					2		60	7.2	4000	-/48
★MV1811B			VSP					2		50	5.0	4000	-/46
★MV1811B1			VSP					2		60	7.2	4000	-/46
★MV1811C			VSP					2		50	5.0	4000	-/47
★MV1811C1			VSP					2		60	7.2	4000	-/47
★MV1811D			VSP										
★MV1811J			VSP					2		50	5.0	4000 M	4/44
★MV1811J1			VSP					2		60	7.2	4000 M	4/44
★MV1812A			VSP	3.25 C	20	0.8	25	2		39	5.0	4000 M	-/48
★MV1812B			VSP	3.25 C	20	0.8	25	2		39	5.0	4000 M	-/46
★MV1816A			VSP	7.5 C	75	3.1 6.0	20	8		20	5.0	4000 M	-/48
★MV1816A1			VSP	11.5 C	75	3.1 6.0	10	8		25	0.75	2400 M	-/48
★MV1816B			VSP	7.5 C	75	3.0 6.0	20	8		20	0.6	2400 M	-/46
★MV1816B1			VSP	11.5 C	75	3.0 6.0	10	8		25	7.2	2000 M	-/46
★MV1816D			VSP									M	
★MV1817A			VSP	5.0 C	35	1.1 6.0	20	8		20	0.2	6400 M	-/48
★MV1817A1			VSP	7.0 C	35	1.1 6.0	10	8		25	0.25	6400 M	-/48
★MV1817B			VSP	5.0 C	35	1.0 6.0	20	8		20	0.2	6400 M	-/46
★MV1817B1			VSP	7.0 C	35	1.0 6.0	10	8		25	0.25	6400 M	-/46
★MV1817D			VSP									M	
★MV1858D		MV1858D	VST	5.0 A	60	1.0 4.0	30	2.1	4.0	60	350	100 M	-/45
★MV1860D		MV1858D	VST	5.0 A	60	2.2 4.0	20	2.5	4.0	60	350	100 M	-/45
★MV1862D		MV1858D	VST	5.0 A	60	3.3 4.0	10	2.6	4.0	60	300	100 M	-/45
★MV1863D		MV1858D	VST	5.0 A	60	4.7 4.0	10	2.6	4.0	60	300	100 M	-/45
★MV1864D		MV1858D	VST	5.0 A	60	6.8 4.0	10	2.7	4.0	60	300	100 M	-/45
★MV1865D		MV1858D	VST	5.0 A	60	8.2 4.0	10	2.7	4.0	60	300	100 M	-/45
★MV1866		MV1866	VST	2.0 A	60	10 4.0	10	3.0	4.0	60	500	50 M	7/51
★MV1866D		MV1858D	VST	5.0 A	60	10 4.0	10	2.8	4.0	60	250	100 M	/45
★MV1868		MV1866	VST	2.0 A	60	12 4.0	10	3.0	4.0	60	500	50 M	7/51
★MV1868D		MV1858D	VST	5.0 A	60	12 4.0	10	2.8	4.0	60	200	100 M	/45
★MV1870		MV1866	VST	2.0 A	60	15 4.0	10	3.0	4.0	60	400	50 M	7/51
★MV1870D		MV1858D	VST	5.0 A	60	15 4.0	10	2.8	4.0	60	200	100 M	/45
★MV1871		MV1866	VST	2.0 A	60	18 4.0	10	3.0	4.0	60	400	50 M	7/51
★MV1872		MV1866	VST	2.0 A	60	22 4.0	10	3.2	4.0	60	400	50 M	7/51
★MV1874		MV1866	VST	2.0 A	60	27 4.0	10	3.2	4.0	60	300	50 M	7/51
★MV1876		MV1866	VST	2.0 A	60	33 4.0	10	3.2	4.0	60	300	50 M	7/51
★MV1877		MV1866	VST	2.0 A	60	39 4.0	10	3.2	4.0	60	300	50 M	7/51
★MV1878		MV1866	VST	2.0 A	60	47 4.0	10	3.2	4.0	60	300	50 M	7/51
★MV2097		MV2907	VST	0.28 A	30	1.0 4.0	10	2.0	2.0	30	325	100 M	-/166
★MV2098		MV2907	VST	0.28 A	30	2.2 4.0	10	2.0	2.0	30	325	100 M	-/166
★MV2099		MV2907	VST	0.28 A	30	3.3 4.0	10	2.2	2.0	30	300	100 M	-/166
★MV2100		MV2907	VST	0.28 A	30	4.7 4.0	10	2.4	2.0	30	300	100 M	-/166
★MV2101		MV2101	VST	0.28 A	30	6.8 4.0	10	2.5	2.0	30	450	50 M	-/182
★MV2102		MV2101	VST	0.28 A	30	8.2 4.0	10	2.5	2.0	30	450	50 M	-/
★MV2103		MV2101	VST	0.28 A	30	10 4.0	10	2.5	2.0	30	400	50 M	-/
★MV2104		MV2101	VST	0.28 A	30	12 4.0	10	2.5	2.0	30	400	50 M	-/
★MV2105		MV2101	VST	0.28 A	30	15 4.0	10	2.5	2.0	30	400	50 M	-/
★MV2106		MV2101	VST	0.28 A	30	18 4.0	10	2.5	2.0	30	350	50 M	-/
★MV2107		MV2101	VST	0.4 A	30	22 4.0	10	2.5	2.0	30	350	50 M	/182
★MV2108		MV2101	VST	0.4 A	30	27 4.0	10	2.5	2.0	30	300	50 M	/182
★MV2109		MV2101	VST	0.4 A	30	33 4.0	10	2.5	2.0	30	200	50 M	/182
★MV3102		MV3102	VST	0.4 A	30	22 3.0	13	4.5	3.0	25	300	100 M	/226
★MV3103		MV3102	VST	0.4 A	30	22 3.0	18	4.0	3.0	25	200	100 M	/226
★MV3140		MV3140	VST	0.4 A	30	2.3* 3.0	0	4.5	3.0	25	150	100 M	/226
★MV3141		MV3140	VST	0.4 A	30	3.2* 3.0	0	4.0	3.0	25	150	100 M	/226
★MV3142		MV3140	VST	0.4 A	30	3.2* 3.0	0	3.5	3.0	25	50	100 M	/226
★MV3501		MV3501	VST	0.4 A	30	6.8 4.0	10	2.7	2.0	30	225	100 M	-/226
★MV3502		MV3501	VST	0.4 A	30	8.2 4.0	10	2.8	2.0	30	225	100 M	-/226
★MV3503		MV3501	VST	0.4 A	30	10 4.0	10	2.8	2.0	30	200	100 M	-/226
★MV3504		MV3501	VST	0.4 A	30	12 4.0	10	2.8	2.0	30	200	100 M	-/226
★MV3505		MV3501	VST	0.4 A	30	15 4.0	10	2.9	2.0	30	200	100 M	-/226
★MV3506		MV3501	VST	0.4 A	30	18 4.0	10	2.9	2.0	30	175	100 M	-/226
★MV3507		MV3501	VST	0.4 A	30	22 4.0	10	2.9	2.0	30	175	100 M	-/226

TABLE 4 - MICROWAVE AND UHF DIODES

Short-form specifications for diodes characterized for various UHF and Microwave applications are shown. Included are point-contact, hot-carrier, and p-i-n diodes characterized as mixers and switches.

TYPE NO.	REPLACEMENT	ID	P_D Watts	REF. POINT	V_R Volts	E_B Ergs	I_R μA Max	V_F Volts Max @ I_F	UNIT	I_F Amp Max	C_T pF Max	τ or t_{rr} ns Max	FREQ. BAND	L_C dB ··· R_S Ω Max	NF dB Max @ f	UNIT	PKG. To-Case No. No.
Alphanumerical listing of type numbers																	
Type number of recommended replacement or of nearest electrical equivalent																	
Identification Code 1st Letter D-Diode 2nd Letter G-Germanium S-Silicon 3rd Letter D-Detector S-Switch X-Mixer Z-Variable Impedance																	
Power Dissipation-Normally specified at 25°C, but occasionally specified at higher temperatures																	
A-Ambient Temperature C-Case Temperature																	
Reverse Voltage Rating																	
Burnout Energy																	
Reverse Current																	
								Forward Voltage @ Forward Current Units for Forward Current: u-uA m-mA A-ampere									
										Forward Current Rating							
											Total Capacitance						
												τ-Lifetime t_{rr}-Reverse Recovery Time					
													Operating Frequency Band				
														L_C-Conversion loss for mixers R_S-Dynamic Series Resistance for Switching Diodes				
															Noise Figure		
															Test Frequency Frequency Units M-MHz G-GHz		
															JEDEC Outline Motorola Package Outline		

1N21G-1N78B

TYPE NO.	REPLACEMENT	ID	P_D Watts	REF. POINT	V_R Volts	E_B Ergs	I_R μA Max	V_F Volts Max @ I_F	UNIT	I_F Amp Max	C_T pF Max	τ or t_{rr} ns Max	FREQ. BAND	L_C dB ··· R_S Ω Max	NF dB Max @ f	UNIT	PKG. To-Case No. No.
1N21G		DSX	0.5	A		5									5.5 3060	M	22/
1N23E		DSX	-		-	-	-	-	-	-	-	-	X	-	7.5 9375	M	
1N23F		DSX	0.25	A	-	10	-	-	-	-	-	-	X		7.0 9375	M	
1N23G			0.325	A		2.0				0.01					6.5 9375	M	
1N23H		DSX	-		-	5.0	-	-	-	-	-	-	X	-	6.0 9375	M	
1N26B		DSX			-	0.3	-	-	-	-	-	-		7.5	11 24	G	
1N53		DSX	-		-	0.15	-	-	-	-	-	-	Ka	8.5	13 34.9	G	
1N53A		DSX											Ka	8.5	13 34.9	G	
1N53B		DSX	-		-	0.3	-	-	-	-	-	-	Ka	-	13 34.9	G	
1N53C		DSX	-			0.3	-	-	-	-	-	-	Ka	6.5	9.0 34.9	G	
1N76		DSD											X		9375	M	
1N76A		DSD											X		9375	M	
1N78		DSX	-		-	0.3	-	-	-	-	-	-	Ku	7.5	12 16	G	
1N78A		DSX	-		-	0.3	-	-	-	-	-	-	Ku	7.0	12 16	G	
1N78B		DSX											Ku	-	10 16	G	

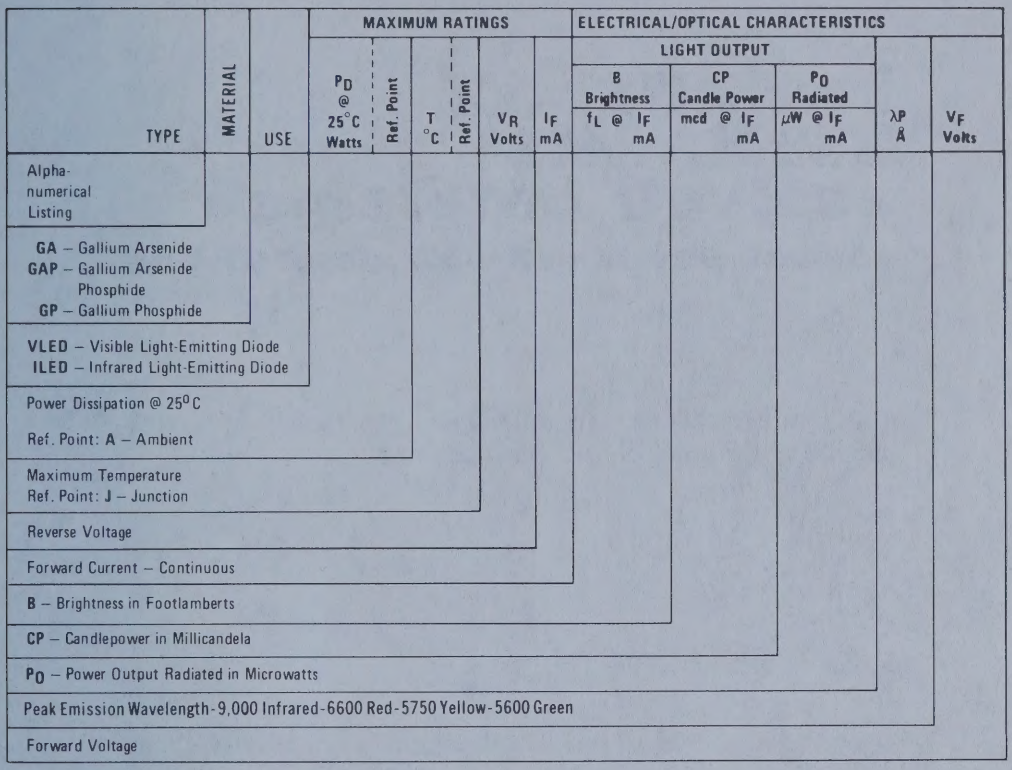
TYPE NO.	REPLACEMENT	ID	P_D Watts	REF. POINT	V_R Volts	E_B Ergs	I_R μA Max	V_F Volts Max @	I_F	UNIT	I_F Amp Max	C_T pF Max	τ or t_{rr} ns Max	FREQ. BAND	L_C dB ... R_S Ω Max	NF dB Max @	f	UNIT	PKG. To-Case No. No.
1N78C		DSX	-		-	0.6	-	-		-	-	-	-	Ku	6.0	12	16	G	
1N78D		DSX	-		-	1.0	-	-		-	-	-	-	Ku	6.0	8.8	16	G	
1N78E		DSX	0.25		-	3.0	-	-		-	-	-	-	Ku	6.0	8.0	16	G	
1N78F		DSX												Ku			16	G	
1N79		D-X															3.0	G	
1N82		DSX	-		5	-	-	-		-	-	-	-	UHF	-	16	700	M	
1N82A		DSX	-		5	-	-	-		-	-	-	-	UHF	-	14	700	M	
1N82AG		DSX														16	1.0	G	
1N82G		DSX														16	1.0	G	
1N105		DSS																	
1N110		DGX												UHF		10	750	M	
1N124		DGX	-		2	-	-	-		-	.025	-	-	UHF	-	10	500	G	
1N124A		DGX	-		2	-	-	-		-	.025	-	-	UHF	-	8	500	G	
1N134		D-D												UHF			0.4	G	
1N147		DGX												UHF		10	0.9	G	
1N147A		DGX												UHF		9	0.9	G	
1N149		DSX												X		8.3	9.0	G	
1N150		DSX												C		9.8	6.8	G	
1N155		DSD															9.0	G	
1N155A		DSD															9.0	G	
1N156		DSX												X			9.0	G	
1N160		DSX												C		11	7.0	G	
1N173A		DSX	-		2	-	-	-		-	.025	-	-	UHF	-	13	1000	M	
1N259		DSX												X			9375	M	
1N263		DGX	-		1.3	-	-	-		-	-	-	-	X	6.0	7.5	9375	M	
1N264		DSX												X			9375	M	
1N269		DGX	-		-	-		0.32	1.0	M	-	-	-	S-X	6.0	7.5	9375	M	
1N285		DGX	-		-	-		-		-	-	-	-	UHF	-	12	870	M	
1N286		DSX	-		0.02	-		-		-	-	-	-	X-K	8.5	14	9375	M	
1N286A		DSX	-		-	-		-		-	-	-	-	X-K	7.5	11	9375	M	
1N311		DSX														10	12	G	
1N358		DSX	-		-	-		-		-	-	-	-	L-X	-	-	6750	M	
1N369,A		DSX												S-X			6750	M	
1N415B		DSX	-		-	1.0		-		-	-	-	-	X	6.5	11	9375	M	
1N415C		DSX	-		-	1.0		-		-	-	-	-	X	6.0	11	9375	M	
1N415D		DSX	-		-	1.0		-		-	-	-	-	X	5.0	11	9375	M	
1N415E		DSX												X		11			
1N415F		DSX												X		11			
1N415G		DSX												X		11			
1N415H		DSX	5.0	E	-	-		-		-	-	-	-	X	-	6.0	9375	M	
1N416B		DSX												S		10			
1N416C		DSX												S		10			
1N416D		DSX												S		10			
1N416E		DSX												S		10			
1N416F		DSX												S		10			
1N416G		DSX												S		10			
1N446		DSD												K-KA					
1N630		DSD	0.2		-	-		-		-	-	-	-	L-X	-	-	6750	M	
1N830		DSD			2						.025			UHF	-	-	100	M	
1N831		DSX	-		-	-		-		-	-	-	-	S	5.5	8.0	3060		
1N831A		DSX	-		-	-		-		-	-	-	-	S	5.5	7.0	3060	M	7/
1N831B		DSX	-		-	-		-		-	-	-	-	S	5.5	6.5	3060	M	7/
1N832		DSX	-		-	-		-		-	-	-	-	X	6.0	10	9375	M	
1N832A		DSX	0.25		-	10		-		-	-	-	-	X		7.5	9375	M	7/
1N832B		DSX												X		9.5			
1N832D		DSX	0.25	A	-	10		-		-	-	-	-	X		6.0	9375	M	7/
1N833		DSD	-		-	-		-		-	-	-	-	X			9375	M	
1N833A		DSD												X			9375	M	7/
1N918		DSX												Ku	7.5			G	
1N1132		DSX												S-X		9.5	12.4	G	
1N1610		DSD												S-X					
1N1611		DSD												C-X					
1N1611A		DSD	0.25	A		10		-		-	-	-	-	C-X			9000	M	
1N1611B		DSD	0.25	A		10		-		-	-	-	-	C-X			9000	M	
1N1838		DGX	-		1	10		-		-	-	-	-	X-Ku	7.0	32	13.5	G	
1N2102		DSD	0.5	A		20		-		-	-	-	-	L-S			3295	M	
1N2127		DSD												L-X					
1N2127A		DSD	0.2	A										L-X			9375	M	
1N2509		DSX	0.25	A		10								C		7.5	10	G	
1N2510		DSX												X		9.5			

TYPE NO.	REPLACEMENT	ID	P_D Watts	REF. POINT	V_R Volts	E_B Ergs	I_R @ V_R μA Max	V_F @ I_F Volts Max	I_F UNIT	I_F Amp Max	C_T pF Max	τ or t_{rr} ns Max	FREQ. BAND	L_C dB @ R_S Ω Max	NF dB Max	f	UNIT	PKG. To-Case No.	No.
1N2771		DSD	0.25	A		10										750	M		
1N2792			0.01	A										10	17	69.8	G		
1N2802		DSX											X	6.0	7.5	9375	M		
1N2926		DSD											X-K			16	G		
1N2926A		DSD														16	G		
1N3093		DGS	0.50	A									X			9000			
1N3096R		DAX	0.01	A										7.5	11	24	G		
1N3143		DGD	0.25	A		10							C-X			9375	M		
1N3481		DGS	0.10	A						0.1			RF			9.0	G		
1N3482		DGS	1.25	A						0.1			RF			9.0	G		
1N3655		DSX	0.375	A		10							S		8.3	3060	M		
1N3655A		DSX	0.375	A		10							S	5.5	7.0	3060	M		
1N3655B		DSX											S		8.3				
1N3733		DSX											S						
1N3745		DSX	.325			5.0							X		9.5	9375	M		
1N3746		DSX	.325			5.0							X		8.5	9375	M		
1N3747		DSX	.325			5.0							X		7.5	9375	M		
1N3777			0.2	A	40			1.0	10 M		1.5								
1N3778		DSD	0.25	A		10							C-X			9375	M		
1N4294		DSX	.375			10							S	5.5		3060	M		
1N4379		DSD											S						
1N4600		DSX													9.5	13	G		
1N4601		DSX													8.8	13	G		
1N4602		DSX													8.0	13	G		
1N4603		DSX													9.5	16	G		
1N4604		DSX													8.8	16	G		
1N4605		DSX													8.0	16	G		
1N4939		DGX	0.1		1	5.0				.005			Ka	6.5	10	34.9	G		
1N4940		DGX	0.2		2	10				.005			Ka	5.0	6.5	9375	M		
1N5165		DSX																	
1N5166		DSX																	
1N5167		DSX																	
1N5168		DSX													6.5	2.0	G		
1N5169		DSX													7.0	2.0	G		
1N5436		DJX	0.25	A		10									7.5	16	G		
1N5437		DJX	0.25	A		10									7.0	16	G		
1N5438		DJX	0.25	A		10									6.5	16	G		
1N5464		D-X		A											7.0	16	G		
1N5906		D-X	0.20	A		0.25								5.0	7.0	16	G	37/	
1N5957		DSS	0.25	A	100		1.0 *	1.2	100 M		0.4			3.5					
MBD101		DJX	0.28	A	4		.25 *	0.6	10 M		1.0				7.0	1.0	G	-/182	
MBD102		DJX	0.40	A	4		.25 *	0.6	10 M		1.0				7.0	1.0	G	-/226	
MBD103		DJX	0.28		4		.25 *	0.6	10 M		1.0			7.0		1.0	G	-/045	
MBD501		DJS	0.50	A	50		.20 *	1.2	10 M		1.0	0.1						-/182	
MBD502		DJD	0.40	A	50		.20 *	1.2	10 M		1.0	0.1						-/226	
MBD701		DJD	0.50	A	70		.20 *	1.2	10 M		1.0	0.1						-/182	
MBD702		DJD	0.40	A	70		.20 *	1.2	10 M		1.0	0.1						-/226	
MBI101		DJX	0.20	A	4		.25 *	0.6	10 M		1.0				7.0	1.0	G	-/166	
MPI3401		DSS	0.20	A	35		0.1 *				1.0			0.7				-/166	
MPN3201		DSS	3.0	C	150					1.0	0.44	150*		1.0				-/046	
MPN3202		DSS	3.0	C	200					1.0	0.40	150*		1.0				-/046	
MPN3208		DSS			800						4.0			0.4				-/	
MPN3209		DSS			900						4.0			0.4				-/	
MPN3401		DSS	0.40	A	35		0.1 *				1.0			0.7				-/226	
MPN3402		DSS	0.40	A	35		0.1 *				2.0			0.6				-/226	
MPN3411		DSS	0.40	A	25						0.45			10				-/226	
MPN3412		DSS	0.40	A	25						0.45			15				-/226	
MPN3601		DSS	0.40	A	35		0.1 *				1.0			0.7				/045	

TABLE 5 - LIGHT-EMITTING DIODES

Short-form specifications for light-emitting diodes

KEY



TYPE	MATERIAL	USE	MAXIMUM RATINGS: PD @ 25°C Watts	Ref. Point	T °C	Ref. Point	VR Volts	IF mA	ELECTRICAL/OPTICAL CHARACTERISTICS: LIGHT OUTPUT: B Brightness fL @ IF mA		CP Candle Power mcd @ IF mA		PO Radiated µW @ IF mA		λP Å	VF Volts
1N5909	GAP	VLED	.075	A	100	J	4.0	35			0.3	20			6600	2.0
1N5910	GAP	VLED	.075	A	100	J	4.0	60			0.3	20			6600	2.0
1N5911	GP	VLED	.125	A	100	J	4.0	35			0.3	25			5600	3.0
1N5912	GP	VLED	.125	A	100	J	4.0	35			0.3	25			5750	3.0
MLED50	GAP	VLED	0.12	A	85	J	3.0	50	750	20					6600	1.6
MLED55	GAP	VLED	0.12	A	85	J	3.0	50			0.3	20			6600	2.0
MLED60	GA	ILED	0.12	A	85	J	3.0	80					550	50	9000	1.2
MLED90	GA	ILED	0.12	A	85	J	3.0	80					350	50	9000	1.2
MLED92	GA	ILED	.215	A	65	J	3.0	100					150	50	9000	1.2
MLED445	GAP	VLED	0.06	A	85	J	4.0	30			0.8	20			6600	2.0
MLED450	GAP	VLED	0.06	A	65	J	4.0	30							6600	1.6
MLED500	GAP	VLED	.215	A	65	J	4.0	100							6600	2.0
MLED600	GAP	VLED	0.12	A	40	J	4.0	50							6600	2.0
MLED610	GAP	VLED	0.35	A	125	J	4.0	75	1100	50					6600	1.6
MLED640	GAP	VLED	0.1	A	40	J	4.0	60							6600	2.0
MLED655	GAP	VLED	0.1	A	40	J	4.0	60							6600	2.0
MLED750	GP	VLED	0.1	A	85	J	4.0	30							5600	3.0
MLED900	GA	ILED	0.12	A	85	J	3.0	80					550	50	9000	1.2
MLED910	GA	ILED	0.35	A	125	J	3.0	150					150	50	9000	1.2
MLED930	GA	ILED	0.25	A	125	J	3.0	150					650	100	9000	1.2

1N...2N...and 3N... JEDEC Registered Devices

and Motorola Non-Registered Devices

2

This section includes an alphanumerical index and short-form specifications for the following products:

Index	Table No.	Page No.
Diode Thyristors – Unidirectional and Bidirectional Switches	6	2-2
Triode Thyristors – SCRs, Triacs, Gate-Controlled Switches		

TABLE 6 - THYRISTORS

Short-form specifications for Thyristors are shown. Included are diodes—four-layer, unilateral and bilateral switches—and triodes—SCR's and Triacs. Thyristors having special features such as gate turn-off characteristics, dual gates, or light sensitivity are indicated.

TYPE NO.	VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts — V_{DRM} Volts Max	I_S μA — I_{GT} mA Max	V_F or V_T @ I_F or I_T Volts	UNIT	I_{FM} or I_{FSM} Amp @ t_W	V_O Volts Min — t_{on} μs Max / t_{off} μs Max	I_H mA Min / mA Max	PACKAGE To-No. / Case No.
Alphanumerical listing of type numbers ★Available from Motorola												
Data Library Volume where complete specifications are located.												
Identification Code 1st Letter Y-Thyristor 2nd Letter K-Gate Turn-off Triode L-Light Activated Q-Dual Gate (Tetrode) X-Diode Y-Standard Triode 3rd Letter B-Bilateral Switch (Triac, SBS, etc.) R-Rectifier (SCR, 4-layer diode, etc.)												
							On-State Voltage @ Test Current Test Current Units: m-mA A-Ampere K-KA		Surge Current Rating @ Pulse Width			
Current Rating												
Switching Voltage for Diodes												
V_S-Switching voltage for Diodes V_{DRM}-Blocking Voltage Rating for Triodes												
I_S-Switching Current I_{GT}-Gate Trigger Current												
										V_O-Output Voltage Pulse t_{on}-turn-on time t_{off}-turn-off time * Typical		
											Holding Current — * Typical	
												JEDEC Outline/Motorola Package Outline

TYPE NO.	VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts V_{DRM} Volts Max	I_S μA I_{GT} mA Max	V_F or V_T @ Volts	I_F or I_T	UNIT	I_{FM} or I_{FSM} Amp	@ t_W	V_O Volts Min t_{on} μs Max	t_{off} μs Max	I_H mA Min	I_H mA Max	PACKAGE To-No.	Case No.
1N3299		YXR		36	44	125				10	10	/1.5		1	15		
1N3300A		YXR		16.2	19.8		4.0	1.0		50	0.25	/0.2		1	15		
1N3301A		YXR		19.8	24.2		3.5	1.0		50	0.25	/0.2		1	15		
1N3302A		YXR		24.3	29.7		3.5	1.0		50	0.25	/0.2		5	20		
1N3303A		YXR		29.7	36.3		3.0	1.0		50	0.25	/0.1		5	20		
1N3304A		YXR		35.1	42.9		3.0	1.0		50	0.25	/0.1		5	20		
1N3489		YXR		16	24	125				10	10			1	6		
1N3489A		YXR		16	24	125				10	10			1	6		
1N3490		YXR		16	24	125				10	10			14	45		
1N3771		YXR		170			1.2	0.1		10				4			
1N3772		YXR		15	25	400	1.2	0.1		10				1.5	50		
1N3831		YXR		16	24	125	2.7	5.0		10	10	/5.0		0.5	15		1/
1N3832		YXR		21	29	125	2.7	5.0		10	10	/5.0		0.5	15		
1N3833		YXR		26	34	125	2.7	5.0		10	10	/5.0		0.5	15		
1N3834		YXR		31	39	125	2.7	5.0		10	10	/5.0		0.5	15		
1N3835		YXR		36	44	125	2.7	5.0		10	10	/5.0		0.5	15		
1N3836		YXR		41	49	125	2.7	5.0		10	10	/5.0		0.5	15		
1N3837		YXR		46	54	125	2.7	5.0		10	10	/5.0		0.5	15		
1N3838		YXR		90	110	125	2.7	5.0		10	10	/5.0		0.5	15		
1N3839		YXR		16	24	125	2.7	5.0		10	10	/5.0		14	50		1/
1N3840		YXR		21	29	125	2.7	5.0		10	10	/5.0		14	50		
1N3841		YXR		26	34	125	2.7	5.0		10	10	/5.0		14	50		
1N3842		YXR		31	39	125	2.7	5.0		10	10	/5.0		14	50		
1N3843		YXR		36	44	125	2.7	5.0		10	10	/5.0		14	50		
1N3844		YXR		41	49	125	2.7	5.0		10	10	/5.0		14	50		
1N3845		YXR		46	54	125	2.7	5.0		10	10	/5.0		14	50		
1N3846		YXR		90	110	125	2.7	5.0		10	10	/5.0		14	50		
1N3935		YXR		26	34		1.2	0.1		10	10	18.5/		14	45		
1N3936		YXR		16	24	125				10	10			5	11		
1N3937		YXR		90	110	125				10	10			1	6		
1N5158		YXR		8	10	50	1.5	.15		10	50			1	20		7/
★ 1N5159		YXR		9	11	50	1.5	.15		10	50			1	20		7/51
★ 1N5160		YXR		10	12	50	1.5	.15		10	50			1	20		7/51
★ 1N5758		YXB		16	24	100				2.0	30	3.0/					/182
★ 1N5758A		YXB		18	22	25				2.0	30	3.0/					/182
★ 1N5759		YXB		20	28	100				2.0	30	3.0/					/182
★ 1N5759A		YXB		22	26	25				2.0	30	3.0/					/182
★ 1N5760		YXB		24	32	100				2.0	30	5.0/					/182
★ 1N5760A		YXB		26	30	25				2.0	30	5.0/					/182
★ 1N5761		YXB		28	36	100				2.0	30	5.0/					/182
★ 1N5761A		YXB		30	34	25				2.0	30	5.0/					/182
★ 1N5762		YXB		32	40	100				2.0	30	5.0/					/182
★ 1N5762A		YXB		34	38	25				2.0	30	5.0/					/182
★ 1N5779		YXR			13	50	1.5	.15						1.0	20		7/51
★ 1N5780		YXR		12	14	50	1.5	.15						1.0	20		7/51
★ 1N5781		YXR		13	15	50	1.5	.15						1.0	20		7/51
★ 1N5782		YXR		8.0	10	100	1.5	.15						10	50		7/51
★ 1N5783		YXR		9.0	11	100	1.5	.15						10	50		7/51
★ 1N5784		YXR		10	12	100	1.5	.15						10	50		7/51
★ 1N5785		YXR		11	13	100	1.5	.15						10	50		7/51
★ 1N5786		YXR		12	14	100	1.5	.15						10	50		7/51
★ 1N5787		YXR		13	15	100	1.5	.15						10	50		7/51
★ 1N5788		YXR		8.0	10	100	1.5	.15						0.1	2.0		7/51
★ 1N5789		YXR		9.0	11	100	1.5	.15						0.1	2.0		7/51
★ 1N5790		YXR		10	12	100	1.5	.15						0.1	2.0		7/51
★ 1N5791		YXR		11	13	100	1.5	.15						0.1	2.0		7/51
★ 1N5792		YXR		12	14	100	1.5	.15						0.1	2.0		7/51
★ 1N5793		YXR		13	15	100	1.5	.15						0.1	2.0		1/51
★ 2N681	1	YYR	16		25	80	2.0	50	A	150							48/
2N681A		YYR	18		25	40	2.1	56	A	250						50	48/
★ 2N682	1	YYR	16		50	80	2.0	50	A	150							48/
2N682A		YYR	18		50	40	2.1	56	A	250						50	48/
★ 2N683	1	YYR	16		100	80	2.0	50	A	150							48/
2N683A		YYR	18		100	40	2.1	56	A	200						50	48/
2N683AS		YYR	25		100	40	1.7	30	A	200		1.4*/12*				50	48/
2N683S		YYR	25		100	40	1.7	30	A	200		1.4*/12*				50	48/
★ 2N684	1	YYR	16		150	80	2.0	50	A	150							48/
2N684A		YYR	18		150	40	2.1	56	A	250						50	48/
★ 2N685	1	YYR	16		200	80	2.0	50	A	150							48/
2N685A		YYR	18		200	40	2.1	56	A	250						50	48/

TYPE NO.		VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts / V_{DRM} Volts Max	I_S μA / I_{GT} mA Max	V_F or V_T @ Volts	I_F or I_T	UNIT	I_{FM} or I_{FSM} @ t_W Amp	V_O Volts Min t_{on} μs Max / t_{off} μs Max	I_H mA Min	I_H mA Max	PACKAGE To-Case No. No.
2N685AS			YYR	25		200	40	1.7	30	A	200	1.4*/12*		50	48/
2N685S			YYR	25		200	40	1.7	30	A	200	1.4*/12*		50	48/
★ 2N686		1	YYR	16		250	80	2.0	50	A	150				48/263
2N686A			YYR	18		250	40	2.1	56	A	250			50	48/
★ 2N687		1	YYR	16		300	80	2.0	50	A	150				48/263
2N687A			YYR	18		300	40	2.1	56	A	250			50	48/
★ 2N688		1	YYR	16		400	80	2.0	50	A	150				48/263
2N688A			YYR	18		400	40	2.1	56	A	250			50	48/
2N688AS			YYR	25		400	40	1.7	30	A	200	1.4*/12*		50	48/
2N688S			YYR	25		400	40	1.7	30	A	200	1.4*/12*		50	48/
★ 2N689		1	YYR	16		500	80	2.0	50	A	150				48/263
2N689A			YYR	18		500	40	2.1	56	A	250			50	48/
2N689AS			YYR	25		500	40	1.7	30	A	200	1.4*/12*		50	48/
2N689S			YYR	25		500	40	1.7	30	A	200	1.4*/12*		50	48/
★ 2N690			YYR	16		600	80	2.0	50	A	150				48/
2N690A			YYR	16		600	80	2.0	16	A	150	/25*			48/
2N690AS			YYR	25		600	40	1.7	30	A	200	1.4*/12*		50	48/
2N690S			YYR	25		600	40	1.7	30	A	200	1.4*/12*		50	48/
2N691			YYR	16		700	80	2.0	50	A	150				48/
2N691A			YYR	25		700	40	2.0	50	A	150	1.4*/20*		50	48/
2N691AS			YYR	25		700	40	1.7	30	A	200	1.4*/12*		50	48/
2N691S			YYR	25		700	40	1.7	30	A	200	1.4*/12*		50	48/
2N692			YYR	16		800	80	2.5	50	A	150				48/
2N692A			YYR	25		800	40	2.0	50	A	150	1.4*/20*		50	48/
2N692AS			YYR	25		800	40	1.7	30	A	200	1.4*/12*		50	48/
2N764			YKR	0.39		15	1.0	30						5.0	18/
2N765			YKR	0.20		60	1.0	1.5						5.0	18/
2N766			YKR	0.20		100	1.0	1.5						5.0	18/
2N767			YKR	0.20		200	1.0	1.5						5.0	18/
2N876			YYR	.35		15	.02	1.5	200	m	20			5.0	18/
2N877			YYR	0.35		30	0.20	1.5	0.2	A	20			5.0	18/
2N878			YYR	0.35		60	0.02	1.5	0.2	A	20			1.0	18/
2N879			YYR	0.35		100	0.20	1.5	0.2	A	20			5.0	18/
2N880			YYR	0.35		150	0.20	1.5	0.2	A	20			5.0	18/
2N881			YYR	0.35		200	0.2	1.5	0.2	A	20			5.0	18/
2N882			YYR	0.35		300	0.2	1.5	0.2	A	20			5.0	18/
2N883			YYR	0.35		400	0.2	1.5	200	m	20			5.0	18/
2N884			YYR	.35		15	.02	1.5	200	m	20			1.0	18/
2N884A			YYR	.275		15	.050	1.5	.20	A	1.0	1.2*/3.2*		1.0	18/
2N885			YYR	0.35		30	0.02	1.5	200	m	20			1.0	18/
2N885A			YYR	.275		30	0.05	1.5	200	m	1.0	1.2*/3.2*		1.0	18/
2N886			YYR	0.35		60	0.02	1.5	200	m	20			1.0	18/
2N886A			YYR	.275		60	0.05	1.5	200	m	1.0	1.2*/3.2*		1.0	18/
2N887			YYR	0.35		100	0.02	1.5	200	m	20			1.0	18/
2N887A			YYR	.275		100	0.05	1.5	200	m	1.0	1.2*/3.2*		1.0	18/
2N888			YYR	0.35		150	0.02	1.5	200	m	20			1.0	18/
2N888A			YYR	.275		150	0.05	1.5	200	m	1.0	1.2*/3.2*		1.0	18/
2N889			YYR	0.35		200	0.02	1.5	200	m	20			1.0	18/
2N889A			YYR	.275		200	0.05	1.5	200	m	1.0	1.2*/3.2*		1.0	18/
2N890			YYR	0.35		300	0.02	1.5	0.2	A	20			1.0	18/
2N891			YYR	0.35		400	0.02	1.5	200	m	20			1.0	18/
2N892			YKR	0.25		15	0.05	2.0			20	/15		1.0	18/
2N893			YKR	0.25		15	0.05	2.0			20	/5.0		1.0	18/
2N894			YKR	0.25		15	0.05	2.0			20	/15		1.0	18/
2N895			YKR	0.25		15	0.05	2.0			20	/15		1.0	18/
2N896			YKR	0.25		60	0.05	2.0			20	/15		1.0	18/
2N897			YKR	0.25		60	0.05	2.0			20	/5.0		1.0	18/
2N898			YKR	0.25		100	0.05	2.0			20	/15		1.0	18/
2N899			YKR	0.25		100	0.05	2.0			20	/5.0		1.0	18/
2N900			YKR	0.25		200	0.05	2.0			20	/15		1.0	18/
2N901			YKR	0.25		200	0.05	2.0			20	/5.0		1.0	18/
2N948			YYR	0.26		30	0.02	2.0	0.2	A	1.0			1.0	18/
2N949			YYR	0.26		60	0.02	2.0	0.2	A	1.0			1.0	18/
2N950			YYR	0.26		100	0.02	2.0	0.2	A	1.0			1.0	18/
2N951			YYR	0.26		200	0.02	2.0	0.2	A	1.0			1.0	18/
★ 2N1595		1	YYR	1.0		50	10	2.0	3.0	A	15				5/
2N1595A			YYR	1.0		50	2.0	2.0	1.0	A	15			5.0	5/
★ 2N1596		1	YYR	1.0		100	10	2.0	3.0	A	15				5/
2N1596A			YYR	1.0		100	2.0	2.0	1.0	A	15			5.0	5/
★ 2N1597		1	YYR	1.0		200	10	2.0	3.0	A	15				5/

TYPE NO.		VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts V_{DRM} Volts Max	I_S μA I_{GT} mA Max	V_F or V_T @ Volts	I_F or I_T	UNIT	I_{FM} or I_{FSM} Amp	@ t_W	V_O Volts Min t_{on} μs Max	t_{off} μs Max	I_H mA Min	I_H mA Max	PACKAGE To-Case No. No.
2N1597A			YYR	1.0		200	2.0	2.0	1.0	A	15					5.0	5/
★ 2N1598		1	YYR	1.0		300	10	2.0	3.0	A	15						5/31
2N1598A			YYR	1.0		300	2.0	2.0	1.0	A	15					5.0	5/
★ 2N1599		1	YYR	1.0		400	10	2.0	3.0	A	15						5/31
2N1599A			YYR	1.0		400	2.0	2.0	1.0	A	15					5.0	5/
2N1600			YYR	3.0		50	10	2.0	3.0	A	25						64/
2N1601			YYR	3.0		100	10	2.0	3.0	A	25						64/
2N1602			YYR	3.0		200	10	2.0	3.0	A	25						64/
2N1603			YYR	3.0		200	10	2.0	3.0	A	25						64/
2N1604			YYR	3.0		400	10	2.0	3.0	A	25						64/
2N1686			YKR	0.5		30	1.0	2.0								5.0	5/
2N1687			YKR	0.5		60	1.0	2.0								5.0	5/
2N1688			YKR	0.5		100	1.0	2.0			5.0					5.0	5/
2N1689			YKR	0.5		200	1.0	2.0								5.0	5/
2N1770			YYR	4.7		25	30	1.8	14	A	60					80	64/
2N1771			YYR	4.7		50	30	1.8	14	A	60						64/
2N1771A			YYR	4.7		50	30	1.8	14	A	60					80	64/
2N1772			YYR	4.7		100	30	1.8	14	A	60						64/
2N1772A			YYR	4.7		100	30	1.8	14	A	60					80	64/
2N1773			YYR	4.7		150	30	1.8	14	A	60						64/
2N1773A			YYR	4.7		150	30	1.8	14	A	60					80	64/
2N1774			YYR	4.7		200	30	1.8	14	A	60						64/
2N1774A			YYR	4.7		200	30	1.8	14	A	60					80	64/
2N1775			YYR	4.7		250	30	1.8	14	A	60						64/
2N1775A			YYR	4.7		250	30	1.8	14	A	60					80	64/
2N1776			YYR	4.7		300	30	1.8	14	A	60						64/
2N1776A			YYR	4.7		300	30	1.8	14	A	60					80	64/
2N1777			YYR	4.7		400	30	1.8	14	A	60						64/
2N1777A			YYR	4.7		400	30	1.8	14	A	60					80	64/
2N1778			YYR	4.7		500	30	1.8	14	A	60						64/
2N1778A			YYR	7.0		500	6.0	1.9	4.7	A	60						
★ 2N1792			YYR	70		60	0.13	1.8	219	A	1000						83/
★ 2N1793			YYR	70		120	130	1.8	219	A	1000						83/
★ 2N1794			YYR	70		180	130	1.8	219	A	1000						83/
★ 2N1795			YYR	70		240	130	1.8	219	A	1000						83/
★ 2N1796			YYR	70		300	130	1.8	219	A	1000						83/
★ 2N1797			YYR	70		360	130	1.8	219	A	1000						83/
★ 2N1798			YYR	70		480	130	1.8	219	A	1000						83/
★ 2N1799			YYR	70		600	130	1.8	219	A	1000						83/
★ 2N1800			YYR	70		720	130	1.8	219	A	1000						83/220
★ 2N1801			YYR	70		700	130	1.7	219	A	1000						83/
★ 2N1802			YYR	70		800	130	1.7	219	A	1000						83/
★ 2N1803			YYR	70		900	200	2.0	219	A	1000						83/
2N1804			YYR	70		1000	200	2.0	219	A	1000						83/
★ 2N1805			YYR	70		500	130	1.8	219	A	1000						49/
★ 2N1806			YYR	70		600	130	1.8	219	A	1000						49/
★ 2N1807			YYR	70		700	130	1.8	219	A	1000						49/
★ 2N1842		1	YYR	10		25	150	2.5	31	A	125						48/
★ 2N1842A		1	YYR	10		25	150	2.5	31	A	125						48/
2N1842B			YYR	13		25	75	1.8	40	A	150						48/
★ 2N1843		1	YYR	10		50	150	2.5	31	A	125						48/
★ 2N1843A		1	YYR	10		50	150	2.5	31	A	125						48/
2N1843B			YYR	13		50	75	1.8	40	A	150						48/
★ 2N1844		1	YYR	10		100	150	2.5	31	A	125						48/
★ 2N1844A		1	YYR	10		100	150	2.5	31	A	125						48/
2N1844B			YYR	13		100	75	1.8	40	A	150						48/
★ 2N1845		1	YYR	10		150	150	2.5	31	A	125						48/
★ 2N1845A		1	YYR	10		150	150	2.5	31	A	125						48/
2N1845B			YYR	13		150	75	1.8	40	A	150						48/
★ 2N1846		1	YYR	10		200	150	2.5	31	A	125						48/
★ 2N1846A		1	YYR	10		200	150	2.5	31	A	125						48/
2N1846B			YYR	13		200	75	1.8	41	A	150						48/
★ 2N1847		1	YYR	10		250	150	2.5	31	A	125						48/263
★ 2N1847A		1	YYR	10		250	150	2.5	31	A	125					3.5	48/263
2N1847B			YYR	13		250	75	1.8	40	A	150						48/
★ 2N1848		1	YYR	10		300	150	2.5	31	A	125						48/263
★ 2N1848A		1	YYR	10		300	150	2.5	31	A	125						48/263
2N1848B			YYR	13		300	75	1.8	40	A	150						48/
★ 2N1849		1	YYR	10		400	150	2.5	31	A	125						48/263
★ 2N1849A		1	YYR	10		400	150	2.5	31	A	125						48/263

TYPE NO.		VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts V_{DRM} Volts Max	I_S μA I_{GT} mA Max	V_F or V_T @ Volts	I_F or I_T	UNIT	I_{FM} or I_{FSM} @ t_W Amp	V_O Volts Min — t_{on} μs Max	t_{off} μs Max	I_H mA Min	mA Max	PACKAGE To- No.	Case No.
2N1849B			YYR	13		400	75	1.8	40	A	150					48/	
★ 2N1850		1	YYR	10		500	150	2.5	31	A	125					48/263	
★ 2N1850A		1	YYR	10		500	150	2.5	31	A	125					48/263	
2N1850B			YYR	13		500	75	1.8	40	A	150					48/	
2N1869			YYR	1.25		15	0.20	2.5	2.0	A	20				5.0	9/	
2N1870			YYR	1.25		30	0.2	2.5	2.0	A	20				5.0	9/	
2N1870A			YYR	1.25		30	0.2	2.5	2.0	A	20				5.0	9/	
2N1871			YYR	1.25		60	0.20	2.5	2.0	A	20				5.0	9/	
2N1871A			YYR	1.25		60	0.20	2.5	2.0	A	20				5.0	9/	
2N1872			YYR	1.25		100	0.20	2.5	2.0	A	20				5.0	9/	
2N1872A			YYR	1.25		100	0.20	2.5	2.0	A	20				5.0	9/	
2N1873			YYR	1.25		150	0.2	2.5	2.0	A	20				5.0	9/	
2N1873A			YYR	1.25		150	0.2	2.5	2.0	A	20				5.0	9/	
2N1874			YYR	1.25		200	0.2	2.5	2.0	A	20				5.0	9/	
2N1874A			YYR	1.25		200	0.2	2.5	2.0	A	20				5.0	9/	
2N1875			YYR	1.25		15	0.02	2.5	2.0	A	20				3.0	9/	
2N1875A			YYR	1.25		15	.02	2.5	2.0	A	5.0				3.0	9/	
2N1876			YYR	1.25		30	0.02	2.5	2.0	A	20				3.0	9/	
2N1876A			YYR	1.25		30	0.02	2.5	2.0	A	5.0	0.1*/0.5*			3.0	9/	
2N1877			YYR	1.25		60	0.02	2.5	2.0	A	20				3.0	9/	
2N1877A			YYR	1.25		60	0.02	2.5	2.0	A	20	0.1*/0.5*			3.0	9/	
2N1878			YYR	1.25		100	0.02	2.5	2.0	A	20				3.0	9/	
2N1878A			YYR	1.25		100	0.02	2.5	2.0	A	5.0	0.1*/			3.0	9/	
2N1879			YYR	1.25		150	0.02	2.5	2.0	A	20				3.0	9/	
2N1879A			YYR	1.25		150	0.02	2.5	2.0	A	20	0.1*/			3.0	9/	
2N1880			YYR	1.25		200	0.02	2.5	2.0	A	20				3.0	9/	
2N1880A			YYR	1.25		200	0.02	2.5	2.0	A	5.0	0.1*/0.5*			3.0	9/	
2N1881			YYR	1.0		30	2.0	2.0	1.0	A	20					9/	
2N1882			YYR	1.0		60	2.0	2.0	1.0	A	20					9/	
2N1883			YYR	1.0		100	2.0	2.0	1.0	A	20					9/	
2N1884			YYR	1.0		150	2.0	2.0	1.0	A	20					9/	
2N1885			YYR	1.0		200	2.0	2.0	1.0	A	20					9/	
★ 2N1909			YYR	70		25	130	1.8	219	A	1000					49/	
★ 2N1910			YYR	70		50	130	1.8	219	A	1000					49/	
★ 2N1911			YYR	70		100	130	1.8	219	A	1000					49/	
★ 2N1912			YYR	70		150	130	1.8	219	A	1000					49/	
★ 2N1913			YYR	70		200	130	1.8	219	A	1000					49/	
★ 2N1914			YYR	70		250	130	1.8	219	A	1000					49/	
★ 2N1915			YYR	70		300	130	1.8	219	A	1000					49/	
★ 2N1916			YYR	70		400	130	1.8	219	A	1000					49/	
2N1929			YYR	.75		25	30	1.4	.75	A	30				80		
2N1930			YYR	0.75		50	30	1.4	.75	A	30				80		
2N1931			YYR	0.75		100	30	1.4	.75	A	30				80		
2N1932			YYR	0.75		150	30	1.4	.75	A	30				80		
2N1933			YYR	0.75		200	30	1.4	.75	A	30				80		
2N1934			YYR	0.75		250	30	1.4	.75	A	30				80		
2N1935			YYR	0.75		300	30	1.4	.75	A	30				80		
2N1966			YKR	0.2		15	0.5								20	5/	
2N1967			YYR	0.2		15	0.5							15	80	5/	
2N1968			YKR	0.2		18	0.3								5.0	5/	
2N2009			YYR	1.3		25	0.20	1.2	1.0	A	15				5.0	5/	
2N2010			YYR	1.3		50	0.2	1.2	1.0	A	15				5.0	5/	
2N2011			YYR	1.3		100	0.20	1.2	1.0	A	15				5.0	5/	
2N2012			YYR	1.3		200	0.2	1.2	1.0	A	15				5.0	5/	
2N2013			YYR	1.3		300	0.2	1.2	1.0	A	15				5.0	5/	
2N2014			YYR	1.3		400	0.2	1.2	1.0	A	15				5.0	5/	
★ 2N2023			YYR	70		25	150	1.9	219	A	1000					49/	
★ 2N2024			YYR	70		50	150	1.9	219	A	1000					49/	
★ 2N2025			YYR	70		100	150	1.9	219	A	1000					49/	
★ 2N2026			YYR	70		150	150	1.9	219	A	1000					49/	
★ 2N2027			YYR	70		200	150	1.9	219	A	1000					49/	
★ 2N2028			YYR	70		250	150	1.9	219	A	1000					49/	
★ 2N2029			YYR	70		300	150	1.9	219	A	1000					49/	
★ 2N2030			YYR	70		400	150	1.9	219	A	1000					49/	
2N2031			YYR	70		50	130	1.8	219	A	1000					49/	
★ 2N2322		1	YYR	1.6		25	0.35	1.5	1.6	A	15				3.0	5/	
2N2322A			YYR	1.6		25	.075	1.5	1.6	A	15				3.0	5/	
★ 2N2323		1	YYR	1.6		50	0.35	1.5	1.6	A	15				3.0	5/	
2N2323A			YYR	1.6		50	.075	1.5	1.6	A	15				3.0	5/	
★ 2N2324			YYR	1.6		100	0.35	1.5	1.6	A	15				3.0	5/	

TYPE NO.		VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts V_{DRM} Volts Max	I_S μA I_{GT} mA Max	V_F or V_T @ Volts	I_F or I_T	UNIT	I_{FM} or I_{FSM} Amp	@ t_W	V_O Volts Min t_{on} μs Max	t_{off} μs Max	I_H mA Min	I_H mA Max	PACKAGE To-No.	Case No.
2N2324A			YYR	1.6		100	.075	1.5	1.6	A	15					3.0		5/
★ 2N2325		1	YYR	1.6		150	0.35	1.5	1.6	A	15					3.0		5/
2N2325A			YYR	1.6		150	0.75	1.5	1.6	A	15					3.0		5/
★ 2N2326		1	YYR	1.6		200	0.35	1.5	1.6	A	15					3.0		5/
2N2326A			YYR	1.6		200	0.07	1.5	1.6	A	15					3.0		5/
★ 2N2327			YYR	1.6		250	0.35	1.5	1.6	A	15					3.0		5/
2N2327A			YYR	1.6		250	.075	1.5	1.6	A	15					3.0		5/
★ 2N2328			YYR	1.6		300	0.35	1.5	1.6	A	15					3.0		5/
2N2328A			YYR	1.6		300	0.75	1.5	1.6	A	15					3.0		5/
★ 2N2329			YYR	1.6		400	0.35	1.5	1.6	A	15					3.0		5/
2N2329A			YYR	1.6		400	0.75	1.5	1.6	A	15					3.0		5/
2N2344		1	YYR	1.6		25	.075	1.5	1.6	A	15					1.0		5/
2N2345		1	YYR	1.6		50	.075	1.5	1.6	A	15					1.0		5/
2N2346			YYR	1.6		100	.075	1.5	1.6	A	15					1.0		5/
2N2347			YYR	1.6		150	0.75	1.5	1.6	A	15					1.0		5/
2N2348			YYR	1.6		200	0.07	1.5	1.6	A	15					1.0		5/
2N2454			YYR	3.0		400	20	2.0	3.0	A	75		1.0/					
2N2503			YYR	150		50	150	1.4	471	A	3500					50		93/
2N2504			YYR	150		100	150	1.4	471	A	3500					50		93/
2N2505			YYR	150		200	150	1.4	471	A	3500					50		93/
2N2506			YYR	150		1000	150	1.4	150	A	3500					50		93/
2N2507			YYR	150		400	150	1.4	471	A	3500					50		93/
2N2508			YYR	150		500	150	1.4	471	A	3500					50		93/
2N2542			YYR	205		50	150	1.5	150	A	3500					50		93/
2N2543			YYR	205		100	150	1.5	150	A	3500					50		93/
2N2544			YYR	205		200	150	1.5	150	A	3500					50		93/
2N2545			YYR	205		300	150	1.5	150	A	3500					50		93/
2N2546			YYR	205		400	150	1.5	150	A	3500					50		93/
2N2547			YYR	205		500	150	1.5	150	A	3500					50		93/
2N2548			YYR	205		600	150	1.5	150	A	3500					50		93/
2N2549			YYR	205		800	150	1.5	150	A	3500					50		93/
2N2550			YYR	205		1000	150	1.5	150	A	3500					50		93/
★ 2N2573		1	YYR	16		25	40	0.7	16	A	260							41/
★ 2N2574		1	YYR	16		50	40	0.7	16	A	260							41/
★ 2N2575		1	YYR	16		100	40	0.7	16	A	260							41/
★ 2N2576			YYR	16		200	40	0.7	16	A	260							41/61
★ 2N2577			YYR	16		300	40	0.7	16	A	260							41/61
★ 2N2578			YYR	16		400	40	0.7	16	A	260							41/61
★ 2N2579		1	YYR	16		500	40	0.7	16	A	260							41/61
★ 2N2598			YYR	16		400	40	0.7	16	A	260							41/61
2N2615A			YYR	200		50	150	1.4	100	A	3300							93/
2N2619			YYR	4.7		600	30	1.8	4.7	A	60							64/
2N2653			YYR	3.0		400	20	2.0	3.0	A	75							64/
2N2679			YYR	0.35		30	0.10	1.2	0.2	A	2.0					2.0		18/
2N2679A			YYR	0.35		30	0.02	1.2	0.2	A	2.0		0.3/10			0.5		18/
2N2680			YYR	0.35		60	0.1	1.2	0.2	A	2.0					2.0		18/
2N2680A			YYR	0.35		60	0.02	1.2	200	m	2.0		0.3/10			0.5		18/
2N2681			YYR	0.35		100	0.1	1.2	200	m	2.0					2.0		18/
2N2681A			YYR	0.35		100	0.02	1.2	200	m	2.0		0.3/10			0.5		18/
2N2682			YYR	0.35		200	0.1	1.2	0.2	A	2.0					2.0		18/
2N2682A			YYR	0.35		200	0.02	1.2	200	m	2.0		0.3/10			0.5		18/
2N2683			YYR	0.28		30	0.02	1.2	0.2	A	2.0					1.0		18/
2N2683A			YYR	0.35		30	0.02	1.2	200	m	2.0		0.3/10			0.5		18/
2N2684			YYR	0.28		60	0.02	1.2	0.2	A	2.0					1.0		18/
2N2684A			YYR	0.35		60	0.02	1.2	200	m	2.0		0.3/10			0.5		18/
2N2685			YYR	0.28		100	0.02	1.2	0.2	A	2.0					1.0		18/
2N2685A			YYR	0.35		100	0.02	1.2	200	m	2.0		0.3/10			0.5		18/
2N2686			YYR	0.28		200	0.02	1.2	0.2	A	2.0					1.0		18/
2N2686A			YYR	0.35		200	0.02	1.2	200	m	2.0		0.3/10			0.5		18/
★ 2N2687			YYR	0.28		30	0.20	1.5	0.2	A	2.0					2.0		18/
★ 2N2688			YYR	0.28		60	0.20	1.5	0.2	A	2.0					2.0		18/
★ 2N2689			YYR	0.28		100	0.20	1.5	0.2	A	2.0					2.0		18/
★ 2N2690			YYR	0.28		200	0.20	1.5	0.2	A	2.0					2.0		18/
2N2888			YYR	16		200	80	2.0	50	A	150							48/
2N2889			YYR	16		250	80	2.0	50	A	150							48/
2N3001			YYR	0.25		30	0.02	1.2	350	m	6.0							18/
2N3002			YYR	0.25		60	0.02	1.2	350	m	6.0							18/
2N3003		1	YYR	0.25		100	0.02	1.2	350	m	6.0							18/
2N3004			YYR	0.25		200	0.02	1.2	350	m	6.0							18/
2N3005			YYR	0.25		30	0.20	1.2	350	m	6.0					5.0		18/

TYPE NO.		VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts V_{DRM} Volts Max	I_S μA I_{GT} mA Max	V_F or V_T @ Volts	I_F or I_T	UNIT	I_{FM} or I_{FSM} Amp	@ t_W	V_O Volts Min t_{on} μs Max	t_{off} μs Max	I_H mA Min	mA Max	PACKAGE To- No.	Case No.
2N3006			YYR	0.25		60	0.02	1.2	350	m	6.0					5.0	18/	
2N3007			YYR	0.25		100	0.20	1.2	350	m	6.0					5.0	18/	
2N3008			YYR	0.25		200	0.2	1.2	350	m	6.0					5.0	18/	
2N3027			YYR	0.5		30	1.2	1.5	1.0	A	5.0		0.2*/2.0*			10	18/	
2N3028			YYR	0.5		60	1.2	1.5	1.0	A	5.0		0.2*/2.0*			10	18/	
2N3029			YYR	0.5		100	1.2	1.5	1.0	A	5.0		0.2*/2.0*			10	18/	
2N3030			YYR	0.5		30	0.02	1.3	500	m	5.0		0.1*/2.0*			4.0	18/	
2N3031			YYR	0.5		60	0.02	1.3	500	m	5.0		0.1*/2.0*			4.0	18/	
2N3032			YYR	0.5		100	0.02	1.3	500	m	5.0		0.1*/2.0*			4.0	18/	
2N3091			YYR	70		600	200	1.9	70	A	1000						49/	
2N3092			YYR	70		700	200	1.9	70	A	1000						49/	
2N3093			YYR	70		800	200	1.9	70	A	1000						49/	
2N3094			YYR	70		900	200	1.9	70	A	1000						49/	
2N3095			YYR	70		1000	200	1.9	70	A	1000						49/	
2N3096			YYR	70		1100	200	1.9	70	A	1000						49/	
2N3097			YYR	70		1200	200	1.9	70	A	1000						49/	
2N3098			YYR	70		1300	200	1.9	70	A	1000					200	49/	
2N3099			YYR	70		600	200	1.9	70	A	1000						49/	
2N3100			YYR	70		700	200	1.9	70	A	1000						49/	
2N3101			YYR	70		800	200	1.9	70	A	1000						49/	
2N3102			YYR	70		900	200	1.9	70	A	1000						49/	
2N3103			YYR	70		1000	200	1.9	70	A	1000						49/	
2N3104			YYR	70		1100	200	1.9	70	A	1000						49/	
2N3105			YYR	70		1200	200	1.9	70	A	1000						49/	
2N3106			YYR	70		1300	200	1.9	70	A	1000					200	49/	
2N3228			YYR	3.2		200	15	1.5	3.2	A	60						66/	
2N3254			YYR	0.25		15	0.02	1.2	250	m	1.0		.15*/2.5*			2.0	46/	
2N3255			YYR	0.25		30	0.02	1.2	250	m	1.0		.15*/2.5*			2.0	46/	
2N3256			YYR	0.25		60	0.02	1.2	250	m	1.0		.15*/2.5*			2.0	46/	
2N3257			YYR	0.25		15	0.2	1.2	250	m	1.0		.15*/3.5*			3.0	46/	
2N3258			YYR	0.25		30	0.20	1.2	250	m	1.0		.15*/3.5*			3.0	46/	
2N3259			YYR	0.25		60	0.02	1.2	250	m	1.0		.15*/3.5*			3.0	46/	
2N3269			YYR	6.0		100	0.2	1.2	1.0	A	60		3.0*/22*			2.0	59/	
2N3270			YYR	6.0		200	0.2	1.2	1.0	A	60		3.0*/22*			2.0	59/	
2N3271			YYR	6.0		300	0.2	1.2	1.0	A	60		3.0*/22*			2.0	59/	
2N3272			YYR	6.0		400	0.2	1.2	1.0	A	60		3.0*/22*			2.0	59/	
2N3273			YYR	2.2		100	0.2	1.8	2.2	A	15		3.0*/22*			2.0	5/	
2N3274			YYR	2.2		200	0.2	1.8	2.2	A	15		3.0*/22*			2.0	5/	
2N3275			YYR	2.2		300	0.2	1.8	2.2	A	15		3.0*/22*			2.0	5/	
2N3276			YYR	2.2		400	0.2	1.8	2.2	A	15		3.0*/22*			2.0	5/	
2N3353			YYR	250		50	400	1.9	785	A	5000					200	108/	
2N3354			YYR	250		100	400	1.9	785	A	5000					200	108/	
2N3355			YYR	250		200	400	1.9	785	A	5000					200	108/	
2N3356			YYR	250		300	400	1.9	785	A	5000					200	108/	
2N3357			YYR	250		400	400	1.9	785	A	5000					200	108/	
2N3358			YYR	250		500	400	1.9	785	A	5000					200	108/	
2N3359			YYR	250		600	400	1.9	785	A	5000					200	108/	
2N3360			YYR	250		700	400	1.9	785	A	5000					200	108/220	
2N3361			YYR	250		800	400	1.9	785	A	5000					200	108/	
2N3362			YYR	250		900	400	1.9	785	A	5000					200	108/	
2N3363			YYR	250		1000	400	1.9	785	A	5000					200	108/	
2N3364			YYR	250		1200	400	1.9	785	A	5000					200	108/	
2N3525			YYR	3.2		400	15	1.5	3.2	A	60						66/	
2N3528			YYR	1.3		200	15	1.3	1.3	A	60						8/	
2N3529			YYR	1.3		400	15	1.3	1.3	A	60						8/	
2N3530			YYR	250		50	400	1.9	250	A	5000							
2N3531			YYR	250		100	400	1.9	250	A	5000							
2N3532			YYR	250		200	400	1.9	250	A	5000							
2N3533			YYR	250		300	400	1.9	250	A	5000							
2N3534			YYR	250		400	400	1.9	250	A	5000							
2N3535			YYR	250		500	400	1.9	250	A	5000							
2N3536			YYR	250		600	400	1.9	250	A	5000							
2N3537			YYR	250		700	400	1.9	250	A	5000							
2N3538			YYR	250		800	400	1.9	250	A	5000							
2N3539			YYR	250		900	400	1.9	250	A	5000							
2N3540			YYR	250		1000	400	1.9	250	A	5000							
2N3541			YYR	250		1200	400	1.9	250	A	5000							
2N3555			YYR	1.6		30	0.02	1.4	1.6	A	18					3.0	5/	
2N3556			YYR	1.6		60	0.02	1.4	1.6	A	18					3.0	5/	
2N3557			YYR	1.6		100	0.02	1.4	1.6	A	18					3.0	5/	

TYPE NO.		VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts V_{DRM} Volts Max	I_S μA I_{GT} mA Max	V_F or V_T @ Volts	I_F or I_T	UNIT	I_{FM} or I_{FSM} Amp	@ t_W	V_O Volts Min — t_{on} μs Max	t_{off} μs Max	I_H mA Min	I_H mA Max	PACKAGE To-Case No.	No.
2N3558			YYR	1.6		200	0.02	1.4	1.6	A	18					3.0	5/	
2N3559			YYR	1.6		30	0.2	1.4	1.6	A	18					5.0	5/	
2N3560			YYR	1.6		60	0.20	1.4	1.6	A	18					5.0	5/	
2N3561			YYR	1.6		100	0.2	1.4	1.6	A	18					5.0	5/	
2N3562			YYR	1.6		200	0.2	1.4	1.6	A	18					5.0	5/	
2N3649			YYR	16		50	500	2.0	25	A	180		/15*			350	48/	
2N3650			YYR	16		100	500	2.0	25	A	180		/15*			350	48/	
2N3651			YYR	16		200	500	2.0	25	A	180		/15*			350	48/	
2N3652			YYR	16		300	180	2.0	25	A	180					350	48/	
2N3653			YYR	16		400	500	2.0	25	A	180		/15*			350	48/	
2N3654			YYR	16		50	500	2.0	25	A	180		/10*			350	48/	
2N3655			YYR	16		100	500	2.0	25	A	180		/10*			350	48/	
2N3656			YYR	16		200	500	2.0	25	A	180		/10*			350	48/	
2N3657			YYR	16		300	180	2.0	25	A	180		/10*			350	48/	
2N3658			YYR	16		400	500	2.0	25	A	180		/10*			350	48/	
2N3668			YYR	8.0		100	80	1.8	25	A	200						3/	
2N3669			YYR	8.0		200	80	1.8	25	A	200						3/	
2N3690			YYR	8.0		400	80	1.8	25	A	200						3/	
2N3753			YYR	7.5		50	200	2.3	70	A	250		/75*			200	48/	
2N3754			YYR	7.5		100	200	2.3	70	A	250		/75*			200	48/	
2N3755			YYR	7.5		200	200	2.3	70	A	250		/75*			200	48/	
2N3756			YYR	7.5		300	200	2.3	70	A	250		/75*			200	48/	
2N3757			YYR	7.5		400	200	2.3	70	A	250		/75*			200	48/	
2N3758			YYR	9.5		500	200	2.3	70	A	250		/75*			200	48/	
2N3759			YYR	7.5		600	200	2.3	70	A	250		/75*			200	48/	
2N3760			YYR	7.5		700	200	2.3	70	A	250		/75*			200	48/	
2N3761			YYR	7.5		800	200	2.3	70	A	250		/75*			200	48/	
★ 2N3870		1	YYR	22		100	80	1.8	69	A	350							
★ 2N3871		1	YYR	22		200	80	1.8	69	A	350						/174	
★ 2N3872		1	YYR	22		300	80	1.8	69	A	350						/174	
★ 2N3873		1	YYR	22		400	80	1.8	69	A	350						/174	
2N3884			YYR	175		50	400	1.8	175	A	4500		/50			200	93/	
2N3885			YYR	175		100	400	1.8	175	A	4500					200	93/	
2N3886			YYR	175		200	400	1.8	175	A	4500					200	93/	
2N3887			YYR	175		300	400	1.8	175	A	4500					200	93/	
2N3888			YYR	175		400	400	1.8	175	A	4500					200	93/	
2N3889			YYR	175		500	400	1.8	175	A	4500					200	93/	
2N3890			YYR	175		600	400	1.8	175	A	4500					200	93/	
2N3891			YYR	175		700	400	1.8	175	A	4500					200	9/	
2N3892			YYR	175		800	400	1.8	175	A	4500					200	93/	
2N3893			YYR	175		900	400	1.8	175	A	4500					200	93/	
2N3894			YYR	175		1000	400	1.8	175	A	4500					200	93/	
2N3895			YYR	175		1200	400	1.8	175	A	4500					200	93/	
★ 2N3896		1	YYR	22		100	80	1.8	69	A	350							
★ 2N3897		1	YYR	22		200	80	1.8	69	A	350						/175	
★ 2N3898		1	YYR	22		300	80	1.8	69	A	350						/175	
★ 2N3899		1	YYR	22		400	80	1.8	69	A	350						/175	
2N3936			YYR	7.0		100	60	2.3	7.0	A	100		3.0*/8.0*			110	64/	
2N3937			YYR	7.0		200	60	2.3	7.0	A	100		3.0*/8.0*			110	64/	
2N3938			YYR	7.0		300	60	2.3	7.0	A	100		3.0*/8.0*			110	64/	
2N3939			YYR	7.0		400	60	2.3	7.0	A	100		3.0*/8.0*			110	64/	
2N3940			YYR	7.0		500	60	2.3	7.0	A	100		3.0*/8.0*			110	64/	
2N3986			YYR	70		500	200	2.9	220	A	1000		/50*				94/	
2N3987			YYR	70		600	200	2.9	220	A	1000		/50*				94/	
2N3988			YYR	70		700	200	2.9	220	A	1000		/50*				94/	
2N3989			YYR	70		800	200	2.9	220	A	1000		/50*				94/	
2N3990			YYR	70		900	200	2.9	220	A	1000		/50*				94/	
2N3991			YYR	70		1000	200	2.9	220	A	1000		/50*				94/	
2N3992			YYR	70		1100	200	2.9	220	A	1000		/50*				94/	
2N4096			YYR	1.0		50	0.20	1.6	.50	A	4.0		1.5*/15*			2.0	46/	
2N4097			YYR	1.0		100	0.20	1.6	0.5	A	4.0		1.5*/15*			2.0	46/	
2N4098			YYR	1.0		200	0.2	1.6	0.5	A	4.0		1.5*/15*			2.0	46/	
2N4101			YYR	3.2		600	30	2.0	10	A	60						66/	
2N4102			YYR	1.3		600	30	1.6	4.1	A	60						8/	
2N4103			YYR	8.0		600	80	1.8	25	A	200						3/	
2N4108			YYR	0.18		50	0.2	1.6	500	m	4.0		1.5*/15*			2.0	18/	
2N4109			YYR	0.18		100	0.2	1.6	500	m	4.0		1.5*/15*			2.0	18/	
2N4110			YYR	0.18		200	0.2	1.6	500	m	4.0		1.5*/15*			2.0	18/	
2N4144			YYR	0.25		15	1.0	2.5	800	m	8.0					5.0		
2N4145			YYR	0.25		30	1.0	2.5	800	m	8.0					5.0		

TYPE NO.		VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts / V_{DRM} Volts Max	I_S μA / I_{GT} mA Max	V_F or V_T Volts @	I_F or I_T	UNIT	I_{FM} or I_{FSM} Amp @	t_W	V_O Volts Min — t_{on} μs Max	t_{off} μs Max	I_H mA Min	I_H mA Max	PACKAGE To-No.	Case No.
2N4146			YYR	0.25		60	1.0	2.5	800	m	8.0					5.0		
2N4147			YYR	0.25		100	1.0	2.5	800	m	8.0					5.0		
2N4148			YYR	0.25		150	1.0	2.5	800	m	8.0					5.0		
2N4149			YYR	0.25		200	1.0	2.5	800	m	8.0					5.0		
2N4151			YYR	5.0		25	60	2.0	15	A	100					60		
2N4152			YYR	5.0		50	60	2.0	15	A	100					60		
2N4153			YYR	5.0		100	60	2.0	15	A	100					60		
2N4154			YYR	5.0		200	60	2.0	15	A	100					60		
2N4155			YYR	5.0		300	60	2.0	15	A	100					60		
2N4156			YYR	5.0		400	60	2.0	15	A	100					60		
2N4157			YYR	5.0		500	60	2.0	15	A	100					60		
2N4158			YYR	5.0		600	60	2.0	15	A	100					60		
2N4159			YYR	5.0		25	60	2.0	15	A	100					60		
2N4160			YYR	5.0		50	60	2.0	15	A	100					60		
2N4161			YYR	5.0		100	60	2.0	15	A	100					60		
2N4162			YYR	5.0		200	60	2.0	15	A	100					60		
2N4163			YYR	5.0		300	60	2.0	15	A	100					60		
2N4164			YYR	5.0		400	60	2.0	15	A	100					60		
2N4165			YYR	5.0		500	60	2.0	15	A	100					60		
2N4166			YYR	5.0		600	60	2.0	15	A	100					60		
★ 2N4167		1	YYR	5.0		25	60	2.0	15	A	100					60		
★ 2N4168		1	YYR	5.0		50	60	2.0	15	A	100					60		
★ 2N4169		1	YYR	5.0		100	60	2.0	15	A	100					60		
★ 2N4170		1	YYR	5.0		200	60	2.0	15	A	100					60		
★ 2N4171		1	YYR	5.0		300	60	2.0	15	A	100					60		/86
★ 2N4172		1	YYR	5.0		400	60	2.0	15	A	100					60		/86
★ 2N4173		1	YYR	5.0		500	60	2.0	15	A	100					60		/86
★ 2N4174		1	YYR	5.0		600	60	2.0	15	A	100					60		86/
★ 2N4175		1	YYR	5.0		25	60	2.0	15	A	100					60		
★ 2N4176		1	YYR	5.0		50	60	2.0	15	A	100					60		
★ 2N4177		1	YYR	5.0		100	60	2.0	15	A	100					60		
★ 2N4178		1	YYR	5.0		200	60	2.0	15	A	100					60		
★ 2N4179		1	YYR	5.0		300	60	2.0	15	A	100					60		/866
★ 2N4180		1	YYR	5.0		400	60	2.0	15	A	100					60		/866
★ 2N4181		1	YYR	5.0		500	60	2.0	100	A	100					60		/86L
★ 2N4182		1	YYR	5.0		600	60	2.0	15	A	100					60		/866
★ 2N4183		1	YYR	5.0		25	60	2.0	15	A	100					60		
★ 2N4184		1	YYR	5.0		50	60	2.0	15	A	100					60		
★ 2N4185		1	YYR	5.0		100	60	2.0	15	A	100					60		
★ 2N4186		1	YYR	5.0		200	60	2.0	15	A	100					60		
★ 2N4187		1	YYR	5.0		300	60	2.0	15	A	100					60		/876
★ 2N4188		1	YYR	5.0		400	60	2.0	15	A	100					60		/876
★ 2N4189		1	YYR	5.0		500	60	2.0	15	A	100					60		/87L
★ 2N4190		1	YYR	5.0		600	60	2.0	15	A	100					60		/866
2N4191			YYR	5.0		25	60	2.0	15	A	100					60		
2N4192		1	YYR	5.0		50	60	2.0	15	A	100					60		
2N4193		1	YYR	5.0		100	60	2.0	15	A	100					60		
2N4194		1	YYR	5.0		200	60	2.0	15	A	100					60		
2N4195		1	YYR	5.0		300	60	2.0	15	A	100					60		
2N4196		1	YYR	5.0		400	60	2.0	15	A	100					60		
2N4197		1	YYR	5.0		500	60	2.0	15	A	100					60		
2N4198		1	YYR	5.0		600	60	2.0	15	A	100					60		
★ 2N4199		1	YYR	2.0		300	100	1.5	2.0	A	100	10	0.4	20		3.0		/63
★ 2N4200		1	YYR	2.0		400	100	1.5	2.0	A	15		0.2*	20*		3.0		/63
★ 2N4201		1	YYR	2.0		500	100	1.5	2.0	A	15		0.2*	20*		3.0		
★ 2N4202		1	YYR	2.0		600	100	1.5	2.0	A	15		0.2*	20*		3.0		
★ 2N4203		1	YYR	2.0		700	100	1.5	2.0	A	15		0.2*	20*		3.0		
★ 2N4204		1	YYR	2.0		800	100	1.5	2.0	A	15		0.2*	20*		3.0		
2N4205			YYR	2.0		900	100	1.5	2.0	A	15		0.2*	20*		3.0		
★ 2N4212		1	YYR	1.0		25	0.30	2.0	3.1	A	15					7.0		5/
★ 2N4213		1	YYR	1.0		50	0.3	2.0	3.1	A	15					7.0		5/
★ 2N4214			YYR	1.0		100	0.3	2.0	3.1	A	15					7.0		5/
★ 2N4215		1	YYR	1.0		150	0.3	2.0	3.1	A	15					7.0		5/
★ 2N4216		1	YYR	1.0		200	0.3	2.0	3.1	A	15					7.0		5/
★ 2N4217			YYR	1.0		250	0.3	2.0	3.1	A	15					7.0		5/
★ 2N4218			YYR	1.0		300	0.3	2.0	3.1	A	15					7.0		5/
★ 2N4219			YYR	1.0		400	0.3	2.0	3.1	A	15					7.0		5/
2N4320			YKR			30		2.0			5.0					3.0		52/
2N4321			YKR			60		2.0			5.0					3.0		52/
2N4322			YKR			100		2.0			5.0					3.0		52/

TYPE NO.		VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts V_{DRM} Volts Max	I_S μA I_{GT} mA Max	V_F or V_T @ Volts	I_F or I_T	UNIT	I_{FM} or I_{FSM} Amp	@ t_W	V_O Volts Min t_{on} μs Max	t_{off} μs Max	I_H mA Min	I_H mA Max	PACKAGE To-Case No.	No.
2N4323			YKR			150		2.0			5.0					2.0	52/	
2N4324			YKR			200		2.0			5.0					3.0	52/	
2N4325			YKR			250		2.0			5.0					3.0	52/	
2N4326			YKR			30		2.0			5.0					3.0	52/	
2N4327			YKR			60		2.0			5.0					3.0	52/	
2N4328			YKR			100		2.0			5.0					3.0	52/	
2N4329			YKR			150		2.0			5.0					3.0	52/	
2N4330			YKR			200		2.0			5.0					3.0	52/	
2N4331			YKR			250		2.0			5.0					3.0	52/	
2N4332			YYR	0.39		30	0.01	1.5	0.8	A	8.0		/10*			1.0	52/	
2N4333			YYR	0.39		60	0.01	1.5	0.8	A	8.0		/10			1.0	52/	
★ 2N4334			YYR	0.39		100	0.01	1.5	0.8	A	8.0		/10*			1.0	52/	
2N4335			YYR	0.39		150	0.01	1.5	0.8	A	8.0		/10*			1.0	52/	
2N4336			YYR	0.39		200	0.01	1.5	0.8	A	8.0		/10*			1.0	52/	
2N4337			YYR	0.39		250	0.01	1.5	0.8	A	8.0		/10*			1.0	52/	
★ 2N4361		1	YYR	70		100	250	2.0	70	A	1600					200	94/	
★ 2N4362		1	YYR	70		200	250	2.0	70	A	1600					200	94/219	
★ 2N4363		1	YYR	70		400	250	2.0	70	A	1600					200	94/219	
★ 2N4364		1	YYR	70		600	250	2.0	70	A	1600					200	94/219	
★ 2N4365		1	YYR	70		800	250	2.0	70	A	1600					200	94/219	
★ 2N4366		1	YYR	70		1000	250	2.9	70	A	1600					200	94/219	
★ 2N4367		1	YYR	70		1200	250	2.0	70	A	1600					200	94/219	
★ 2N4368			YYR	70		1400	250	2.0	70	A	1600					200	94/219	
2N4369			YYR	70		1600	250	2.0	70	A	1600					200	94/	
2N4370			YYR	70		1800	250	2.0	70	A	1600					200	94/	
★ 2N4371		1	YYR	70		100	250	2.0	70	A	1600					200	83/	
★ 2N4372		1	YYR	70		200	250	2.0	70	A	1600					200	83/246	
★ 2N4373		1	YYR	70		400	250	2.0	70	A	1600					200	83/246	
★ 2N4374		1	YYR	70		600	250	2.0	70	A	1600					200	83/246	
★ 2N4375		1	YYR	70		800	250	2.0	70	A	1600					200	83/246	
★ 2N4376		1	YYR	70		1000	250	2.0	70	A	1600					200	83/246	
★ 2N4377		1	YYR	70		1200	250	2.0	70	A	1600					200	83/246	
★ 2N4378		1	YYR	70		1400	250	2.0	70	A	1600					200	83/246	
2N4379			YYR	70		1600	250	2.0	70	A	1600					200	83/	
2N4380			YYR	70		1800	250	2.0	70	A	1600					200	83/	
★ 2N4441		1	YYR	5.0		50	60	2.0	15	A						70		
★ 2N4442		1	YYR	5.0		200	60	2.0	15	A						70		
★ 2N4443		1	YYR	5.0		400	60	2.0	15	A						70	/90	
★ 2N4444		1	YYR	5.0		600	60	2.0	15	A						70	/90	
2N4983			YXR		6.0	10	500	1.5	.18		1.0	10	3.5/25.0			1.5	18/	
2N4984			YXR		7.5	9.0	150	1.5	0.2		1.0	10	3.5/25.0		.05	0.5	18/	
2N4985			YXR		7.5	8.2	300	1.5	0.2		1.0	10	3.5/25.0		.05	1.0	18/	
2N4986			YXR		7.0	9.0	200	1.5	.18		1.0	10	3.5/25.0			.75	18/	
★ 2N4987			YXR		6.0	10	500	1.5			1.0	10	3.5/25.0			1.5	98/	
★ 2N4988			YXR		7.5	9.0	150	1.5	0.2		1.0	10	3.5/25.0		.05	0.5	98/	
2N4989			YXR		7.5	8.2	300	1.5	0.2		1.0	10	3.5/25.0		.05	1.0	98/	
2N4990			YXR		7.0	9.0	200	1.5			1.0	10	3.5/25.0			.75	98/	
★ 2N4991		1	YXB		6.0	10	500	1.7	.18		1.0	10	3.5/				98*/	
★ 2N4992			YXB		7.5	9.0	120	1.7	0.2		1.0	10	3.5/				98*/	
★ 2N4993		1	YXB		6.0	10	500	1.7	2.0		1.0	10	3.5/			1.5	18*/22	
★ 2N5060		2	YYR	.255		30	0.35	1.7	1.2	A	6.0					10	92/	
★ 2N5061		2	YYR	.255		60	0.35	1.7	1.2	A	6.0					10	92/	
★ 2N5062		2	YYR	.255		100	0.35	1.7	1.2	A	6.0					10	92/	
★ 2N5063		2	YYR	.225		150	0.35	1.7	1.2	A	6.0					10	92/	
★ 2N5064		2	YYR	.255		200	0.35	1.7	1.2	A	6.0					10	92/	
★ 2N5164		2	YYR	7.0		50	75	1.7	41	A	240					90		
★ 2N5165		2	YYR	7.0		200	75	1.7	41	A	240					90		
★ 2N5166		2	YYR	7.0		400	75	1.7	41	A	240					90	/174	
★ 2N5167			YYR	7.0		600	75	1.7	41	A	240					90	/174	
★ 2N5168		2	YYR	7.0		50	75	1.7	41	A	240					90		
★ 2N5169		2	YYR	7.0		200	75	1.7	41	A	240					90		
★ 2N5170		2	YYR	7.0		400	75	1.7	41	A	240					90	/174	
★ 2N5171		2	YYR	7.0		600	75	1.7	41	A	240					90	/174	
2N5200			YYR	22		1000	80	2.3	70	A	100					200	48/	
2N5204			YYR	22		600	80	2.3	70	A	300					0.2	48/	
2N5205			YYR	22		800	80	2.5	125	A	300					0.2	48/	
2N5207			YYR	22		1200	80	2.3	70	A	300					200	48/	
2N5257			YYB	200		400	800	2.1	889	A	1300					850	93/	
2N5258			YYB	200		600	800	2.1	889	A	1300					850	93/	
2N5259			YYB	200		800	800	2.1	889	A	1300					850	93/221	

TYPE NO.		VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts / V_{DRM} Volts Max	I_S μA / I_{GT} mA Max	V_F or V_T @ Volts	I_F or I_T	UNIT	I_{FM} or I_{FSM} Amp	@ t_W	V_O Volts Min — t_{on} μs Max	t_{off} μs Max	I_H mA Min	I_H mA Max	PACKAGE To- No.	Case No.
2N5260			YYB	200		1000	800	2.1	889	A	1300					850	93/	
2N5261			YYB	200		1200	800	2.1	889	A	1300					850	93/	
2N5273			YYB	25		200	150	1.7	109	A	400					100	48/	
2N5274			YYB	25		400	150	1.7	109	A	400					100	48/	
2N5275			YYB	25		600	150	1.7	109	A	400					100	48/	
★ 2N5441		2	YYB	40		200	240	1.8	40	A	300					100	/237	
★ 2N5442			YYB	40		400	240	1.8	40	A	300					100	/237	
★ 2N5443		2	YYB	40		600	240	1.8	40	A	300					100	/237	
★ 2N5444		2	YYB	40		200	240	1.8	40	A	300					100	/238	
★ 2N5445		2	YYB	40		400	240	1.8	40	A	300					100	/238	
★ 2N5446		2	YYB	40		600	240	1.8	40	A	300					100	/238	
★ 2N5567			YYB	10		200	150	1.6	10	A	100					200		
★ 2N5568			YYB	10		400	150	1.6	10	A	100					200		
★ 2N5569			YYB	10		200	150	1.6	10	A	100					200		
★ 2N5570			YYB	10		400	150	1.6	10	A	100		2.0*/			200		
★ 2N5571		2	YYB	15		200	200	1.8	15	A	100					300	/174	
★ 2N5572		2	YYB	15		400	200	1.8	15	A	100					200	/174	
★ 2N5573		2	YYB	15		200	200	1.8	15	A	100					300	/175	
★ 2N5574		2	YYB	15		400	200	1.8	15	A	100					300	/174	
2N5719			YYR	0.20		60	.020	1.4	400	m	5.0		/30*			2.0	18/	
2N5720			YYR	0.2		100	0.02	1.4	400	m	5.0		/30*			2.0	18/	
2N5721			YYR	0.2		200	0.02	1.4	400	m	5.0		/30*			2.0	18/	
2N5722			YYR	0.2		300	0.02	1.4	400	m	5.0		/50*			2.0	18/	
2N5723			YYR	0.2		400	0.02	1.4	400	m	5.0		/50*			2.0	18/	
2N5724			YYR	0.39		60	0.02	1.5	780	m	8.0		/30			2.0	5/	
2N5725			YYR	0.39		100	0.02	1.5	780	m	8.0		/30*			2.0	5/	
2N5726			YYR	0.39		200	0.02	1.5	780	m	8.0		/30*			2.0	5/	
2N5727			YYR	0.39		300	0.02	1.5	780	m	8.0		/50*			2.0	5/	
2N5728			YYR	0.39		400	0.02	1.5	780	m	8.0		/50*			2.0	5/	
2N5754			YYB	2.5		100	110	1.8	2.5	A	25					82		
2N5755			YYB	2.5		200	110	1.8	2.5	A	25					82		
2N5756			YYB	2.5		400	110	1.8	2.5	A	25					82		
2N5757			YYB	2.5		600	110	1.8	2.5	A	25					82		
★ 2N5787			YYR	0.24		30	0.35	1.2	240	m	4.0					10	106/	
★ 2N5788			YYR	0.24		60	.350	1.2	240	m	4.0					10	106/	
★ 2N5789			YYR	0.24		100	0.35	1.2	240	m	4.0					10	106/	
★ 2N5790			YYR	0.24		200	0.35	1.2	240	m	4.0					10	106/	
★ 2N6068		2	YYB	4.0		25	60	2.0	6.0	A	30					70	/77	
★ 2N6068A			YYB	2.0		25	20	2.0	6.0	A	30					30	/77	
★ 2N6068B		2	YYB	2.0		25	15	2.0	6.0	A	30					30	/77	
★ 2N6069		2	YYB	4.0		50	60	2.0	6.0	A	30					70	/77	
★ 2N6069A		2	YYB	2.0		50	20	2.0	6.0	A	30					30	/77	
★ 2N6069B		2	YYB	2.0		50	15	2.0	6.0	A	30					30	/77	
★ 2N6070		2	YYB	4.0		100	60	2.0	6.0	A	30					70	/77	
★ 2N6070A		2	YYB	2.0		100	20	2.0	6.0	A	30					30	/77	
★ 2N6070B		2	YYB	2.0		100	15	2.0	6.0	A	30					30	/77	
★ 2N6071		2	YYB	4.0		200	60	2.0	6.0	A	30					70	/77	
★ 2N6071A		2	YYB	2.0		200	20	2.0	6.0	A	30					30	/77	
★ 2N6071B		2	YYB	2.0		200	15	2.0	6.0	A	30					30	/77	
★ 2N6072		2	YYB	4.0		300	60	2.0	6.0	A	30					70	/77	
★ 2N6072A		2	YYB	2.0		300	20	2.0	6.0	A	30					30	/77	
★ 2N6072B		2	YYB	2.0		300	15	2.0	6.0	A	30					30	/77	
★ 2N6073		2	YYB	4.0		400	60	2.0	6.0	A	30					70	/77	
★ 2N6073A		2	YYB	2.0		400	20	2.0	6.0	A	30					30	/77	
★ 2N6073B		2	YYB	2.0		400	15	2.0	6.0	A	30					30	/77	
★ 2N6074		2	YYB	4.0		500	60	2.0	6.0	A	30					70	/77	
★ 2N6074A		2	YYB	2.0		500	20	2.0	6.0	A	30					30	/77	
★ 2N6074B		2	YYB	2.0		500	15	2.0	6.0	A	30					30	/77	
★ 2N6075		2	YYB	4.0		600	60	2.0	6.0	A	30					70	/77	
★ 2N6075A		2	YYB	2.0		600	20	2.0	6.0	A	30					30	/77	
★ 2N6075B		2	YYB	2.0		600	15	2.0	6.0	A	30					30	/77	
★ 2N6139		2	YYB	10		200	150	1.8	14	A	100		2.0*/			150	/86	
★ 2N6140		2	YYB	10		400	150	1.8	14	A	100		2.0*/			150	/86	
★ 2N6141		2	YYB	10		600	150	1.8	14	A	100		2.0*/			150	/86	
★ 2N6142		2	YYB	10		200	150	1.8	14	A	100		2.0*/			150	/250	
★ 2N6143		2	YYB	10		400	150	1.8	14	A	100		2.0*/			150	/250	
★ 2N6144		2	YYB	10		600	150	1.8	14	A	100		2.0*/			150	/250	
★ 2N6145		2	YYB	15		200	200	1.8	21	A	100		2.0*/			300	/175	
★ 2N6146		2	YYB	15		400	200	1.8	21	A	100		2.0*/			300	/175	
★ 2N6147		2	YYB	15		600	200	1.8	21	A	100		2.0*/			300	/175	

TYPE NO.		VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts V_{DRM} Volts Max	I_S μA I_{GT} mA Max	V_F or V_T @ Volts	I_F or I_T	UNIT	I_{FM} or I_{FSM} @ t_W Amp		V_O Volts Min t_{on} μs Max	t_{off} μs Max	I_H mA Min	mA Max	PACKAGE To-Case No. No.
★ 2N6148		2	YYB	10		200	150	1.8	14	A	100		2.0*/			150	-/876
★ 2N6149		2	YYB	10		400	150	1.8	14	A	100		2.0*/			150	-/876
★ 2N6150		2	YYB	10		600	150	1.8	14	A	100		2.0*/			150	-/876
★ 2N6151		2	YYB	10		200	125	1.8	14	A	100		2.0*/			75	-/90
★ 2N6152		2	YYB	10		400	125	1.8	14	A	100		2.0*/			75	-/90
★ 2N6153		2	YYB	10		600	125	1.8	14	A	100		2.0*/			75	-/90
★ 2N6154		2	YYB	10		200	100	1.8	14	A	100		2.0*/			75	-/90
★ 2N6155		2	YYB	10		400	100	1.8	14	A	100		2.0*/			75	-/90
★ 2N6156		2	YYB	10		600	100	1.8	14	A	100		2.0*/			75	-/90
★ 2N6157		2	YYB	30		200	250	2.0	42	A	250		2.0*/			200	203AA/174
★ 2N6158		2	YYB	30		400	250	2.0	42	A	250		2.0*/			200	203AA/174
★ 2N6159		2	YYB	30		600	250	2.0	42	A	250		2.0*/			200	203AA/174
★ 2N6160		2	YYB	30		200	250	2.0	42	A	250		2.0*/			200	203AA/175
★ 2N6161		2	YYB	30		400	250	2.0	42	A	250		2.0*/			200	-/175
★ 2N6162			YYB	30		600	250	2.0	42	A	250		2.0*/			200	-/175
★ 2N6163		2	YYB	30		200	250	2.0	42	A	250		2.0*/			200	-/235
★ 2N6164		2	YYB	30		400	250	2.0	42	A	250		2.0*/			200	-/235
★ 2N6165		2	YYB	30		600	250	2.0	42	A	250		2.0*/			200	-/235
★ 2N6167		2	YYR	13		100	75	1.7	41	A	240		1.0*/-			90	-
★ 2N6168		2	YYR	13		200	75	1.7	41	A	240		1.0/-			90	-
★ 2N6169		2	YYR	13		400	75	1.7	41	A	240		1.0*/-			90	-/235
★ 2N6170		2	YYR	13		600	75	1.7	41	A	240		1.0*/-			90	-/235
★ 2N6171		1	YYR	22		100	80	1.8	69	A	350		1.5*/-			90	-
★ 2N6172		2	YYR	22		200	80	1.8	69	A	350		1.5*/-			90	-/235
★ 2N6173		2	YYR	22		400	80	1.8	69	A	350		1.5*/-			90	-/235
★ 2N6174		1	YYR	22		600	80	1.8	69	A	350		1.5*/-			90	-/235
★ 2N6236		2	YYR	2.6		30	0.5	2.2	8.2	A	25		2.0*/-			10	-
★ 2N6237		2	YYR	2.6		50	0.5	2.2	8.2	A	25		2.0*/-			10	-
★ 2N6238		2	YYR	2.6		100	0.5	2.2	8.2	A	25		2.0*/-			10	-
★ 2N6239		2	YYR	2.6		200	0.5	2.2	8.2	A	25		2.0*/-			10	-
★ 2N6240		2	YYR	2.6		400	0.5	2.2	8.2	A	25		2.0*/-			10	-/77
★ 2N6241			YYR	2.6		600	0.5	2.2	8.2	A	25		2.0*/-			10	-/77
2N6332			YYR	2.0		30	0.2	2.5	3.9	A	20		2.0*/-			5.0	39/
2N6333			YYR	2.0		50	0.2	2.5	3.9	A	20		2.0*/-			5.0	39/
2N6334			YYR	2.0		100	0.2	2.5	3.9	A	20		2.0*/-			5.0	39/
★ 2N6335			YYR	2.0		200	0.2	2.5	3.9	A	20		2.0*/-			5.0	39/
2N6336		2	YYR	2.0		300	0.2	2.5	3.9	A	20		2.0*/3.9*			5.0	39/
2N6337			YYR	2.0		400	0.2	2.5	3.9	A	20		2.0*/-			5.0	39/
★ 2N6342		2	YYB	8.0		200	125	1.55	11	A	100		2.0*/			75	220AB/221
★ 2N6342A		2	YYB	12		200	125	1.75	17	A	120		2.0*/			75	220AB/221
★ 2N6343		2	YYB	8.0		400	125	1.55	11	A	100		2.0*/			75	220AB/221
★ 2N6343A		2	YYB	12		400	125	1.75	48	A	120		2.0*/			75	220AB/221
★ 2N6344		2	YYB	8.0		600	125	1.5	32	A	100		2.0*/			75	220AB/221
★ 2N6344A		2	YYB	12		600	125	1.75	17	A	120		2.0*/			75	220AB/221
★ 2N6345		2	YYB	8.0		800	125	1.55	11	A	100		2.0*/			75	220AB/221
★ 2N6345A		2	YYB	12		800	125	1.7	17	A	120		2.0*/			75	220AB/221
★ 2N6346		2	YYB	8.0		200	125	1.55	11	A	100		-			75	220AB/221
★ 2N6346A		2	YYB	12		200	125	1.75	17	A	120		2.0*/			75	220AB/221
★ 2N6347			YYB	8.0		400	125	1.55	11	A	100		2.0*/			75	220AB/221
★ 2N6347A		2	YYB	12		400	125	1.75	48	A	120		2.0*/			75	220AB/221
★ 2N6348		2	YYB	8.0		600	125	1.5	32	A	100		2.0*/			75	220AB/221
★ 2N6348A		2	YYB	12		600	125	1.7	17	A	120		2.0*/			75	220AB/221
★ 2N6349		2	YYB	8.0		800	125	1.55	11	A	100		2.0*/			75	220AB/221
★ 2N6349A		2	YYB	12		800	125	1.7	17	A	120		2.0*/			75	220AB/221
2N6925			YYR	25		800	40	1.7	30	A	200		1.4*/12*			50	48/
3N80			YQR	0.2		40	.001	2.0	0.2		1.0	100	-/15		-	1.5	72/-
3N81			YQR	0.2		65	.001	2.0	0.2		1.0	100	-/15		-	1.5	72/-
3N82			YQR	0.2		100	.001	2.0	0.2		1.0	100	-/15		-	1.5	72/-
3N83			YQR	0.05		70	0.15	1.4	.05		0.1	100	-/8		-	4.0	72/-
3N84			YQR	.175		40	0.01	1.9	.18		0.5	100	-/15		-	2.0	72/-
3N85			YQR	.175		100	0.01	1.9	.18		0.5	100	-/15		-	10	72/-
3N86			YQR	0.2		65	.001	2.0	0.2		1.0	100	-/15		-	0.8	72/-
3N221			YYR	1400		1200	200	1.9	1.7	K	7000		13/			600	/-
3N222			YYR	1200		1700	200	1.9	1.7	K	7000		13/			600	/-
★ MAC5-1		3	YYB	10		25	50	1.8	14	A	100		1.5*/			50	-/86
★ MAC5-2		3	YYB	10		50	50	1.8	14	A	100		1.5*/			50	-/86
★ MAC5-3		3	YYB	10		100	50	1.8	14	A	100		1.5*/			50	-/86
★ MAC5-4		3	YYB	10		200	50	1.8	14	A	100		1.5*/			50	-/86
★ MAC5-5		3	YYB	10		300	50	1.8	14	A	100		1.5*/			50	-/86
★ MAC5-6		3	YYB	10		400	50	1.8	14	A	100		1.5*/			50	-/86

MAC5-7-MAC93A4

TYPE NO.		VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts V_{DRM} Volts Max	I_S μA I_{GT} mA Max	V_F or V_T @ I_F or I_T Volts	UNIT	I_{FM} or I_{FSM} Amp	@ t_W	V_O Volts Min t_{on} μs Max	t_{off} μs Max	I_H mA Min	mA Max	PACKAGE To- No.	Case No.
★ MAC5-7		3	YYB	10		500	50	1.8	14 A	100		1.5*/			50	-/86	
★ MAC5-8		3	YYB	10		600	50	1.8	14 A	100		1.5*/			50	-/86	
★ MAC6-1		3	YYB	10		25	50	1.8	14 A	100		1.5*/			50	-/876	
★ MAC6-2		3	YYB	10		50	50	1.8	14 A	100		1.5*/			50	-/876	
★ MAC6-3		3	YYB	10		100	50	1.8	14 A	100		1.5*/			50	-/876	
★ MAC6-4		3	YYB	10		200	50	1.8	14 A	100		1.5*/			50	-/876	
★ MAC6-5		3	YYB	10		300	50	1.8	14 A	100		1.5*/			50	-/876	
★ MAC6-6		3	YYB	10		400	50	1.8	14 A	100		1.5*/			50	-/876	
★ MAC6-7		3	YYB	10		500	50	1.8	14 A	100		1.5*/			50	-/876	
★ MAC6-8		3	YYB	10		600	50	1.8	14 A	100		1.5*/			50	-/876	
★ MAC10-1		3	YYB	10		25	50	1.8	14 A	100		1.5*/			50	-/90	
★ MAC10-2		3	YYB	10		50	50	1.8	14 A	100		1.5*/			50	-/90	
★ MAC10-3		3	YYB	10		100	50	1.8	14 A	100		1.5*/			50	-/90	
★ MAC10-4		3	YYB	10		200	50	1.8	14 A	100		1.5*/			50	-/90	
★ MAC10-5		3	YYB	10		300	50	1.8	14 A	100		1.5*/			50	-/90	
★ MAC10-6		3	YYB	10		400	50	1.8	14 A	100		1.5*/			50	-/90	
★ MAC10-7		3	YYB	10		500	50	1.8	14 A	100		1.5*/			50	-/90	
★ MAC10-8		3	YYB	10		600	50	1.8	14 A	100		1.5*/			50	-/90	
★ MAC11-1		3	YYB	10		25	50	1.8	14 A	100		1.5*/			50	-/90	
★ MAC11-2		3	YYB	10		50	50	1.8	14 A	100		1.5*/			50	-/90	
★ MAC11-3		3	YYB	10		100	50	1.8	14 A	100		1.5*/			50	-/90	
★ MAC11-4		3	YYB	10		200	50	1.8	14 A	100		1.5*/			50	-/90	
★ MAC11-5		3	YYB	10		300	50	1.8	14 A	100		1.5*/			50	-/90	
★ MAC11-6		3	YYB	10		400	50	1.8	14 A	100		1.5*/			50	-/90	
★ MAC11-7		3	YYB	10		500	50	1.8	14 A	100		1.5*/			50	-/90	
★ MAC11-8		3	YYB	10		600	50	1.8	14 A	100		1.5*/			50	-/90	
★ MAC35-1			YYB	25		25	75	1.5	35 A	225		1.0*/			75	-/174	
★ MAC35-2			YYB	25		50	75	1.5	35 A	100		1.0*/			75	-/174	
★ MAC35-3			YYB	25		100	75	1.5	35 A	100		1.0*/			75	-/174	
★ MAC35-4			YYB	25		200	75	1.5	35 A	225		1.0*/			75	-/174	
★ MAC35-6			YYB	25		400	75	1.5	35 A	225		1.0*/			75	-/174	
★ MAC36-1			YYB	25		25	75	1.5	35 A	225		1.0*/			75	-/175	
★ MAC36-2			YYB	25		50	75	1.5	35 A	100		1.0*/			75	-/175	
★ MAC36-3			YYB	25		100	75	1.5	35 A	100		1.0*/			75	-/175	
★ MAC36-4			YYB	25		200	75	1.5	35 A	225		1.0*/			75	-/175	
★ MAC36-6			YYB	25		400	75	1.5	35 A	225		1.0*/			75	-/175	
★ MAC37-1		3	YYB	25		25	75	1.9	35 A	225		1.0*/		10*	75	203/174	
★ MAC37-2		3	YYB	25		50	75	1.9	35 A	225		1.0*/		10*	75	203/174	
★ MAC37-3		3	YYB	25		100	75	1.9	35 A	225		1.0*/		10*	75	203/174	
★ MAC37-4		3	YYB	25		200	75	1.9	35 A	225		1.0*/		10*	75	203/174	
★ MAC37-5		3	YYB	25		300	75	1.9	35 A	225		1.0*/		10*	75	203/174	
★ MAC37-6		3	YYB	25		400	75	1.9	35 A	225		1.0*/		10*	75	203/174	
★ MAC37-7		3	YYB	25		500	75	1.9	35 A	225		1.0*/		10*	75	203/174	
★ MAC38-1		3	YYB	25		25	75	1.9	35 A	225		1.0*/		10*	75	203/175	
★ MAC38-2		3	YYB	25		50	75	1.9	35 A	225		1.0*/		10*	75	203/175	
★ MAC38-3		3	YYB	25		100	75	1.9	35 A	225		1.0*/		10*	75	203/175	
★ MAC38-4		3	YYB	25		200	75	1.9	35 A	225		1.0*/		10*	75	203/175	
★ MAC38-5		3	YYB	25		300	75	1.9	35 A	225		1.0*/		10*	75	203/175	
★ MAC38-6		3	YYB	25		400	75	1.9	35 A	225		1.0*/		10*	75	203/175	
★ MAC38-7		3	YYB	25		500	75	1.9	35 A	225		1.0*/		10*	75	203/175	
★ MAC92-1		3	YYB	0.45		30	5.0	1.7	700 m	6.0		-			10	92/29	
★ MAC92-2			YYB	0.45		60	5.0	1.7	700 m	6.0		-			10	92/29	
★ MAC92-3			YYB	0.45		100	15	1.7	700 m	6.0		-			10	92/29	
★ MAC92-4			YYB	0.45		200	5.0	1.7	700 m	6.0		-			10	92/29	
★ MAC92-5			YYB	0.45		300	5.0	1.7	700 m	6.0		-			10	92/29	
★ MAC92-6			YYB	0.45		400	5.0	1.7	700 m	6.0		-			10	92/29	
★ MAC92A1			YYB	0.45		30	15	1.7	700 m	6.0		-			10	92/29	
★ MAC92A2			YYB	0.45		60	15	1.7	700 m	6.0		-			10	92/29	
★ MAC92A3			YYB	0.45		100	15	1.7	700 m	6.0		-			10	92/29	
★ MAC92A4			YYB	0.45		200	15	1.7	700 m	6.0		-			10	92/29	
★ MAC92A5			YYB	0.45		300	15	1.7	700 m	6.0		-			10	92/29	
★ MAC92A6			YYB	0.45		400	15	1.7	700 m	6.0		-			10	92/29	
★ MAC93-1		3	YYB	0.65		30	5.0	1.8	920 m	6.0		-			10	92/29	
★ MAC93-2			YYB	0.65		60	5.0	1.8	920 m	6.0		-			10	92/29	
★ MAC93-3			YYB	0.65		100	5.0	1.8	920 m	6.0		-			10	92/29	
★ MAC93-4			YYB	0.65		200	5.0	1.8	920 m	6.0		-			10	92/29	
★ MAC93A1			YYB	0.65		30	12	1.8	920 m	6.0		-			10	92/29	
★ MAC93A2			YYB	0.65		60	12	1.8	920 m	6.0		-			10	92/29	
★ MAC93A3			YYB	0.65		100	12	1.8	920 m	6.0		-			10	92/29	
★ MAC93A4			YYB	0.65		200	12	1.8	920 m	6.0		-			10	92/29	

TYPE NO.		VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts / V_{DRM} Volts Max	I_S μA / I_{GT} mA Max	V_F or V_T @ Volts	I_F or I_T	UNIT	I_{FM} or I_{FSM} Amp	@ t_W	V_O Volts Min — t_{on} μs Max	t_{off} μs Max	I_H mA Min	I_H mA Max	PACKAGE To- No.	Case No.
★ MAC94-1		3	YYB	0.80		30	5.0	1.5	1.1	A	6.0		-			10	92/29	
★ MAC94-2			YYB	0.80		60	5.0	1.5	1.1	A	6.0		-			10	92/29	
★ MAC94-3			YYB	0.8		100	5.0	1.5	1.1	A	6.0		-			10	92/29	
★ MAC94-4			YYB	0.8		200	5.0	1.5	1.1	A	6.0		-			10	92/29	
★ MAC94A1			YYB	0.80		30	10	1.5	1.1	A	6.0		-			10	92/29	
★ MAC94A2			YYB	0.80		60	10	1.5	1.1	A	6.0		-			10	92/29	
★ MAC94A3			YYB	0.8		100	10	1.5	1.1	A	6.0		-			10	92/29	
★ MAC94A4			YYB	0.8		200	10	1.5	1.1	A	6.0		-			10	92/29	
★ MAC800-02		3	YYB	4.0		25	30	2.0	6.0	A	40		2.0/			30	39/79	
★ MAC800-05		3	YYB	4.0		50	30	2.0	6.0	A	40		2.0/			30	39/79	
★ MAC800-10		3	YYB	4.0		100	30	2.0	6.0	A	40		2.0/			30	39/79	
★ MAC800-20		3	YYB	4.0		200	30	2.0	6.0	A	40		2.0/			30	39/79	
★ MAC800-40		3	YYB	4.0		400	30	2.0	6.0	A	40		2.0/			30	39/79	
★ MAC800-60		3	YYB	4.0		600	30	2.0	6.0	A	40		2.0/			30	39/79	
★ MAC800-80		3	YYB	4.0		800	30	2.0	6.0	A	40		2.0/			30	39/79	
★ MAC800A-02			YYB	4.0		25	5.0	2.0	6.0	A	40		2.0/			15	39/79	
★ MAC800A-05			YYB	4.0		50	5.0	2.0	6.0	A	40		2.0/			15	39/79	
★ MAC800A-10			YYB	4.0		100	5.0	2.0	6.0	A	40		2.0/			15	39/79	
★ MAC800A-20			YYB	4.0		200	5.0	2.0	6.0	A	40		2.0/			15	39/79	
★ MAC800A-40			YYB	4.0		400	5.0	2.0	6.0	A	40		2.0/			15	39/79	
★ MAC800A-60			YYB	4.0		600	5.0	2.0	6.0	A	40		2.0/			15	39/79	
★ MAC800A-80			YYB	4.0		800	5.0	2.0	6.0	A	40		2.0/			15	39/79	
★ MAC800B-02			YYB	4.0		25	3.0	2.0	6.0	A	40		2.0/			15	39/79	
★ MAC800B-05			YYB	4.0		50	3.0	2.0	6.0	A	40		2.0/			15	39/79	
★ MAC800B-10			YYB	4.0		100	3.0	2.0	6.0	A	40		2.0/			15	39/79	
★ MAC800B-20			YYB	4.0		200	3.0	2.0	6.0	A	40		2.0/			15	39/79	
★ MAC800B-40			YYB	4.0		400	3.0	2.0	6.0	A	40		2.0/			15	39/79	
★ MAC800B-60			YYB	4.0		600	3.0	2.0	6.0	A	40		2.0/			15	39/79	
★ MAC800B-80			YYB	4.0		800	3.0	2.0	6.0	A	40		2.0/			15	39/79	
★ MAC40688		2	YYB	40		200	70	1.8	56	A	300		2.0*/			70	-/237	
★ MAC40689		2	YYB	40		400	70	1.8	56	A	300		2.0/			70	-/237	
★ MAC40690		2	YYB	40		600	70	1.8	56	A	300		2.0*/			70	-/237	
★ MAC40797		2	YYB	10		600	50	1.8	14	A	100		2.0*/			75	203AA/174	
★ MAC40798		2	YYB	10		600	50	1.8	14	A	100		2.0*/			75	-/174	
★ MBS100		3	YXB		3.0	5.0	400	2.0	.18		6.0	10	--			1.0	92/29	
★ MBS4991		3	YXB		6.0	10.0	350									1.5	/92	
★ MBS4992		3	YXB		7.5	9.0	120									0.5	/92	
★ MCR32-05		3	YYR	7.0		50	20	2.6	30	A	80		--			20	39/79	
★ MCR32-20		3	YYR	7.0		200	20	2.6	30	A	80		--			20	39/79	
★ MCR32-30		3	YYR	7.0		300	20	2.6	30	A	80		--			20	39/79	
★ MCR32-40		3	YYR	7.0		400	20	2.6	30	A	80		--			20	39/79	
★ MCR32-50		3	YYR	7.0		500	20	2.6	30	A	80		--			20	39/79	
★ MCR32-60		3	YYR	7.0		600	20	2.6	30	A	80		--			20	39/79	
★ MCR39-05		3	YYR	7.0		50	15	3.5	50	A	180		0.5*/-			1.0	39/79	
★ MCR39-20		3	YYR	7.0		200	15	3.5	50	A	180		0.5*/-			1.0	39/79	
★ MCR39-30		3	YYR	7.0		300	15	3.5	50	A	180		0.5*/-			1.0	39/79	
★ MCR39-40		3	YYR	7.0		400	15	3.5	50	A	180		0.5*/-			20	39/79	
★ MCR39-50		3	YYR	7.0		500	15	3.5	50	A	180		0.5*/-		1.0	-	39/79	
★ MCR39-60		3	YYR	7.0		600	15	3.5	50	A	180		0.5*/-			1.0	39/79	
★ MCR45-10			YYR	55		100	70	3.0	500	A	1200		-/30*			100	83/	
★ MCR45-20			YYR	55		200	70	3.0	500	A	1200		-/30*			100	83/	
★ MCR45-30			YYR	55		300	70	3.0	500	A	1200		-/30*			100	83/	
★ MCR45-40			YYR	55		400	70	3.0	500	A	1200		-/30*			100	83/	
★ MCR45-50			YYR	55		500	70	3.0	500	A	1200		-/30*			100	83/	
★ MCR45-60			YYR	55		600	70	3.0	500	A	1200		-/30*			100	83/	
★ MCR45-70			YYR	55		700	70	3.0	500	A	1200		-/30*			100	83/	
★ MCR45-80			YYR	55		800	70	3.0	500	A	1200		-/30*			100	83/	
★ MCR45-90			YYR	55		900	70	3.0	500	A	1200		-/30*			100	83/	
★ MCR45-100			YYR	55		1000	70	3.0	500	A	1200		-/30*			500	83/	
★ MCR45-110			YYR	55		1100	70	3.0	500	A	1200		-/30*			100	83/	
★ MCR45-120			YYR	55		1200	70	3.0	500	A	1200		-/30*			100	83/	
★ MCR46-10			YYR	55		100	70	3.0	500	A	1200		-/30*			100	94/	
★ MCR46-20			YYR	55		200	70	3.0	500	A	1200		-/30*			100	94/	
★ MCR46-30			YYR	55		300	70	3.0	500	A	1200		-/30*			100	94/	
★ MCR46-40			YYR	55		400	70	3.0	500	A	1200		-/30*			100	94/	
★ MCR46-50			YYR	55		500	70	3.0	500	A	1200		-/30*			100	94/	
★ MCR46-60			YYR	55		600	70	3.0	500	A	1200		-/30*			100	94/	
★ MCR46-70			YYR	55		700	70	3.0	500	A	1200		-/30*			100	94/	
★ MCR46-80			YYR	55		800	70	3.0	500	A	1200		-/30*			100	94/	
★ MCR46-90			YYR	55		900	70	3.0	500	A	1200		-/30*			100	94/	

TYPE NO.		VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts V_{DRM} Volts Max	I_S μA I_{GT} mA Max	V_F or V_T @ Volts	I_F or I_T	UNIT	I_{FM} or I_{FSM} @ t_W Amp	V_O Volts Min — t_{on} μs Max	t_{off} μs Max	I_H mA Min	mA Max	PACKAGE To- No.	Case No.
★ MCR46-100			YYR	55		1000	70	3.0	500	A	1200	-/30*			500	94/	
★ MCR46-110			YYR	55		1100	70	3.0	500	A	1200	-/30*			100	94/	
★ MCR46-120			YYR	55		1200	70	3.0	500	A	1200	-/30*			100	94/	
★ MCR50-10			YYR	110		100	75	2.5	500	A	1000	-/30*			100	94/	
★ MCR50-20			YYR	110		200	75	2.5	500	A	1000	-/30*			100	94/	
★ MCR50-30			YYR	110		300	75	2.5	500	A	1000	-/30*			100	94/	
★ MCR50-40			YYR	110		400	75	2.5	500	A	1000	-/30*			100	94/	
★ MCR50-50			YYR	110		500	75	2.5	500	A	1000	-/30*			100	94/	
★ MCR50-60			YYR	110		600	75	2.5	500	A	1000	-/30*			100	94/	
★ MCR50-70			YYR	110		700	75	2.5	500	A	1000	-/30*			100	94/	
★ MCR50-80			YYR	110		800	75	2.5	500	A	1000	-/30*			100	94/	
★ MCR50-90			YYR	110		900	75	2.5	500	A	1000	-/30*			100	94/	
★ MCR52			YYR	0.25		30	0.20	1.3	250	m	6.0	--			5.0	-/28	
★ MCR52-10			YYR	110		100	75	2.5	500	A	1000	-/30*			100	83/78	
★ MCR52-20			YYR	110		200	75	2.5	500	A	1000	-/30*			100	83/28	
★ MCR52-30			YYR	110		300	75	2.5	500	A	1000	-/30*			100	83/28	
★ MCR52-40			YYR	110		400	75	2.5	500	A	1000	-/30*			100	83/28	
★ MCR52-50			YYR	110		500	75	2.5	500	A	1000	-/30*			100	83/28	
★ MCR52-60			YYR	110		600	75	2.5	500	A	1000	-/30*			100	83/28	
★ MCR52-70			YYR	110		700	75	2.5	500	A	1000	-/30*			100	83/28	
★ MCR52-80			YYR	110		800	75	2.5	500	A	1000	-/30*			100	83/28	
★ MCR52-90			YYR	110		900	75	2.5	500	A	1000	-/30*			100	83/28	
★ MCR53			YYR	0.25		60	0.20	1.3	250	m	6.0	--			5.0	-/78	
★ MCR54			YYR	0.25		100	0.20	1.3	250	m	6.0	--			5.0	-/28	
★ MCR60-10			YYR	110		100	75	1.5	50	A	1000	-/30*			20	94/	
★ MCR60-20			YYR	110		200	75	1.5	50	A	1000	-/30*			20	94/	
★ MCR60-30			YYR	110		300	75	1.5	50	A	1000	-/30*			20	94/	
★ MCR60-40			YYR	110		400	75	1.5	50	A	1000	-/30*			20	94/	
★ MCR60-50			YYR	110		500	75	1.5	50	A	1000	-/30*			20	94/	
★ MCR62-10			YYR	110		100	75	1.5	50	A	1000	-/30*			20	83/	
★ MCR62-20			YYR	110		200	75	1.5	50	A	1000	-/30*			20	83/	
★ MCR62-30			YYR	110		300	75	1.5	50	A	1000	-/30*			20	83/	
★ MCR62-40			YYR	110		400	75	1.5	50	A	1000	-/30*			20	83/	
★ MCR62-50			YYR	110		500	75	1.5	50	A	1000	-/30*			20	83/	
★ MCR80-0.5		3	YYR	50		50	70	1.5	160	A	1000	-/70*			70	-/287	
★ MCR80-05			YYR	80		50	70	1.55	160	A	1000	/70*			70	/287	
★ MCR80-10		3	YYR	50		100	70	1.5	160	A	1000	-/70*			70	-/287	
★ MCR80-20		3	YYR	50		200	70	1.5	160	A	1000	-/70*			70	-/287	
★ MCR80-30		3	YYR	50		300	70	1.5	160	A	1000	-/70*			70	-/287	
★ MCR80-40		3	YYR	50		400	70	1.5	160	A	1000	-/70*			70	-/287	
★ MCR80-50		3	YYR	50		500	70	1.5	160	A	1000	-/70*			70	-/287	
★ MCR80-60		3	YYR	50		600	70	1.5	160	A	1000	-/70*			70	-/287	
★ MCR80-70		3	YYR	50		700	70	1.5	160	A	1000	-/70*			70	-/287	
★ MCR80-80		3	YYR	50		800	70	1.5	160	A	1000	-/70*			70	-/287	
★ MCR81-0.5		3	YYR	50		50	70	1.5	160	A	1000	-/70*			70	-/288	
★ MCR81-05			YYR	80		50	70	1.55	160	A	1000	/70*			70	/288	
★ MCR81-10		3	YYR	50		100	70	1.5	160	A	1000	-/70*			70	-/288	
★ MCR81-20		3	YYR	50		200	70	1.5	160	A	1000	-/70*			70	-/288	
★ MCR81-30		3	YYR	50		300	70	1.5	160	A	1000	-/70*			70	-/287	
★ MCR81-40		3	YYR	50		400	70	1.5	160	A	1000	-/70*			70	-/288	
★ MCR81-50		3	YYR	50		500	70	1.5	160	A	1000	-/70*			70	-/288	
★ MCR81-60		3	YYR	50		600	70	1.5	160	A	1000	-/70*			70	-/288	
★ MCR81-70		3	YYR	50		700	70	1.5	160	A	1000	-/70*			70	-/288	
★ MCR81-80		3	YYR	50		800	70	1.5	160	A	1000	-/70*			70	-/288	
★ MCR82-0.5		3	YYR	50		50	70	1.5	160	A	1000	-/70*			70	-/289	
★ MCR82-05			YYR	80		50	70	1.55	160	A	1000	/70*			70	/291	
★ MCR82-10		3	YYR	50		100	70	1.5	160	A	1000	-/70*			70	-/289	
★ MCR82-20		3	YYR	50		200	70	1.5	160	A	1000	-/70*			70	-/289	
★ MCR82-30		3	YYR	50		300	70	1.5	160	A	1000	-/70*			70	-/288	
★ MCR82-40		3	YYR	50		400	70	1.5	160	A	1000	-/70*			70	-/291	
★ MCR82-50		3	YYR	50		500	70	1.5	160	A	1000	-/70*			70	-/291	
★ MCR82-60		3	YYR	50		600	70	1.5	160	A	1000	-/70*			70	-/291	
★ MCR82-70		3	YYR	50		700	70	1.5	160	A	1000	-/70*			70	-/291	
★ MCR82-80		3	YYR	50		800	70	1.5	160	A	1000	-/70*			70	-/291	
★ MCR051		3	YYR	0.25		15	0.2	1.3	250	m	6.0				5.0	-/28	
★ MCR052		3	YYR	0.25		30	0.2	1.3	250	m	6.0				5.0	-/28	
★ MCR053		3	YYR	0.25		60	0.2	1.3	250	m	6.0				5.0	-/28	
★ MCR054		3	YYR	0.25		100	0.2	1.3	250	m	6.0				5.0	-/28	
★ MCR101		3	YYR	.8		15	0.2	1.7	1.0	A	6.0				5.0	92/29	
★ MCR102		3	YYR	0.8		30	0.2	1.7	1.0	A	6.0				5.0	92/29	

TYPE NO.		VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts / V_{DRM} Volts Max	I_S μA / I_{GT} mA Max	V_F or V_T @ Volts	I_F or I_T @	UNIT	I_{FM} or I_{FSM} @ t_W Amp	V_O Volts Min — t_{on} μs Max	t_{off} μs Max	I_H mA Min	I_H mA Max	PACKAGE To- No.	Case No.
★ MCR103		3	YYR	0.8		60	0.2	1.7	1.0	A	6.0	--			5.0	92	29
★ MCR104		3	YYR	0.8		100	0.20	1.7	1.0	A	6.0	--			5.0	92	29
★ MCR106-1		3	YYR	4.0		30	0.2	2.0	4.0	A	25	--			5.0	-	/77
★ MCR106-2		3	YYR	4.0		60	0.2	2.0	4.0	A	25	--			5.0	-	/77
★ MCR106-3		3	YYR	4.0		100	0.2	2.0	4.0	A	25	--			5.0	-	/77
★ MCR106-4		3	YYR	4.0		200	0.2	2.0	4.0	A	25	--			5.0	-	/77
★ MCR106-6		3	YYR	4.0		400	0.2	2.0	4.0	A	25	--			5.0	-	/77
★ MCR106-8		3	YYR	4.0		600	0.2	2.0	4.0	A	25	--			5.0	-	/77
★ MCR107-1		3	YYR	4.0		30	20	2.0	4.0	A	25	--			20	-	/77
★ MCR107-2		3	YYR	4.0		60	20	2.0	4.0	A	25	--			20	-	/77
★ MCR107-3		3	YYR	4.0		100	20	2.0	4.0	A	25	--			20	-	/77
★ MCR107-4		3	YYR	4.0		200	20	2.0	4.0	A	25	--			20	-	/77
★ MCR107-5		3	YYR	4.0		300	20	2.0	4.0	A	25	--			20	-	/77
★ MCR107-6		3	YYR	4.0		400	20	2.0	4.0	A	25	--			20	-	/77
★ MCR107-7		3	YYR	4.0		500	20	2.0	4.0	A	25	--			20	-	/77
★ MCR107-8		3	YYR	4.0		600	20	2.0	4.0	A	25	--			20	-	/77
★ MCR115		3	YYR	0.8		150	0.2	1.7	1.0	A	6.0	--			5.0	92	29
★ MCR120		3	YYR	0.8		200	0.2	1.7	1.0	A	6.0	--			5.0	92	29
★ MCR150-10			YYR	110		100	150	2.6	500	A	1500	-/60*			500	94	/
★ MCR150-20			YYR	110		200	150	2.6	500	A	1500	-/60*			500	94	/
★ MCR150-30			YYR	110		300	150	2.6	500	A	1500	-/60*			500	94	/
★ MCR150-40			YYR	110		400	150	2.6	500	A	1500	-/60*			500	94	/
★ MCR150-50			YYR	110		500	150	2.6	500	A	1500	-/60*			500	94	/
★ MCR150-60			YYR	110		600	150	2.6	500	A	1500	-/60*			500	94	/
★ MCR150-70			YYR	110		700	150	2.6	500	A	1500	-/60*			500	94	/
★ MCR150-80			YYR	110		800	150	2.6	500	A	1500	-/60*			500	94	/
★ MCR150-90			YYR	110		900	150	2.6	500	A	1500	-/60*			500	94	/
★ MCR150-100			YYR	110		1000	150	2.6	500	A	1500	-/60*			500	94	/
★ MCR150-110			YYR	110		1100	150	2.6	500	A	1500	-/60*			500	94	/
★ MCR150-120			YYR	110		1200	150	2.6	500	A	1500	-/60*			500	83	/
★ MCR150-130			YYR	110		1300	150	2.6	500	A	1500	-/60*			500	94	/
★ MCR150-140			YYR	110		1400	150	2.6	500	A	1500	-/60*			500	94	/
★ MCR150-150			YYR	110		1500	150	2.6	500	A	1500	-/60*			500	94	/
★ MCR152-10			YYR	110		100	150	2.6	500	A	1500	-/60*			500	83	/
★ MCR152-20			YYR	110		200	150	2.6	500	A	1500	-/60*			500	83	/
★ MCR152-30			YYR	110		300	150	2.6	500	A	1500	-/60*			500	83	/
★ MCR152-40			YYR	110		400	150	2.6	500	A	1500	-/60*			500	83	/
★ MCR152-50			YYR	110		500	150	2.6	500	A	1500	-/60*			500	83	/
★ MCR152-60			YYR	110		600	150	2.6	500	A	1500	-/60*			500	83	/
★ MCR152-72			YYR	110		700	150	2.6	500	A	1500	-/60*			500	83	/
★ MCR152-80			YYR	110		800	150	2.6	500	A	1500	-/60*			500	83	/
★ MCR152-90			YYR	110		900	150	2.6	500	A	1500	-/60*			500	83	/
★ MCR152-100			YYR	110		1000	150	2.6	500	A	1500	-/60*			500	83	/
★ MCR152-110			YYR	110		1100	150	2.6	500	A	1500	-/60*			500	83	/
★ MCR152-120			YYR	110		1200	150	2.6	500	A	1500	-/60*			500	83	/
★ MCR152-130			YYR	110		1300	150	2.6	500	A	1500	-/60*			500	83	/
★ MCR152-140			YYR	110		1400	150	2.6	500	A	1500	-/60*			500	83	/
★ MCR152-150			YYR	110		1500	150	2.6	500	A	1500	-/60*			500	83	/
★ MCR154-10		3	YYR	70		100	150	3.0	500	A	1800	-/10*			200	94	219
★ MCR154-20		3	YYR	70		200	150	3.0	500	A	1800	-/10*			200	94	219
★ MCR154-30		3	YYR	70		300	150	3.0	500	A	1800	-/10*			200	94	219
★ MCR154-40		3	YYR	70		400	150	3.0	500	A	1800	-/10*			200	94	219
★ MCR154-50		3	YYR	70		500	150	3.0	500	A	1800	-/10*			200	94	219
★ MCR154-60		3	YYR	70		600	150	3.0	500	A	1800	-/10*			200	94	219
★ MCR155-10		3	YYR	70		100	150	3.0	500	A	1800	-/20*			200	94	219
★ MCR155-20			YYR	70		200	150	3.0	500	A	1800	-/20*			200	94	219
★ MCR155-30		3	YYR	70		300	150	3.0	500	A	1800	-/20*			200	94	219
★ MCR155-40		3	YYR	70		400	150	3.0	500	A	1800	-/20*			200	94	219
★ MCR155-50		3	YYR	70		500	150	3.0	500	A	1800	-/20*			200	94	219
★ MCR155-60		3	YYR	70		600	150	3.0	500	A	1800	-/20*			200	94	219
★ MCR156-10		3	YYR	70		100	150	3.0	500	A	1800	-/10*			200	83	246
★ MCR156-20		3	YYR	70		200	150	3.0	500	A	1800	-/10*			200	83	246
★ MCR156-30		3	YYR	70		300	150	3.0	500	A	1800	-/10*			200	83	246
★ MCR156-40		3	YYR	70		400	150	3.0	500	A	1800	-/10*			200	83	246
★ MCR156-50		3	YYR	70		500	150	3.0	500	A	1800	-/10*			200	83	246
★ MCR156-60		3	YYR	70		600	150	3.0	500	A	1800	-/10*			200	83	246
★ MCR157-10		3	YYR	70		100	150	3.0	500	A	1800	-/20*			200	83	246
★ MCR157-20		3	YYR	70		200	150	3.0	500	A	1800	-/20*			200	83	246
★ MCR157-30		3	YYR	70		300	150	3.0	500	A	1800	-/20*			200	83	246
★ MCR157-40		3	YYR	70		400	150	3.0	500	A	1800	-/20*			200	83	246

TYPE NO.	VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts / V_{DRM} Volts Max	I_S μA / I_{GT} mA Max	V_F or V_T @ Volts	I_F or I_T	UNIT	I_{FM} or I_{FSM} @ t_W Amp	V_O Volts Min	t_{on} μs Max	t_{off} μs Max	I_H mA Min	I_H mA Max	PACKAGE To-No.	Case No.
★ MCR157-50	3	YYR	70		500	150	3.0	500	A	1800		-/20*			200	83/	246
★ MCR157-60	3	YYR	70		600	150	3.0	500	A	1800		-/20*			200	83/	246
★ MCR158-50	3	YYR	70		500	150	3.0	500	A	1600		2.0*/30			500	94/	219
★ MCR158-60	3	YYR	70		600	150	3.0	500	A	1800		2.0*/30			500	94/	219
★ MCR158-70	3	YYR	70		700	150	3.0	500	A	1600		2.0*/30			500	94/	219
★ MCR158-80	3	YYR	70		800	150	3.0	500	A	1600		2.0*/30			500	94/	219
★ MCR158-90	3	YYR	70		900	150	3.0	500	A	1600		2.0*/30			500	94/	219
★ MCR158-100	3	YYR	70		1000	150	3.0	500	A	1600		2.0*/30			500	94/	219
★ MCR158-110	3	YYR	70		1100	150	3.0	500	A	1600		2.0*/30			500	94/	219
★ MCR158-120	3	YYR	70		1200	150	3.0	500	A	1600		2.0*/30			500	94/	219
★ MCR159-50		YYR	70		500	150	3.0	500	A	1600		2.0*/30			500	83/	246
★ MCR159-60		YYR	70		600	150	3.0	500	A	1800		2.0*/30			500	83/	246
★ MCR159-70		YYR	70		700	150	3.0	500	A	1600		2.0*/30			500	83/	246
★ MCR159-80		YYR	70		800	150	3.0	500	A	1600		2.0*/30			500	83/	246
★ MCR159-90		YYR	70		900	150	3.0	500	A	1600		2.0*/30			500	83/	246
★ MCR159-100		YYR	70		1000	150	3.0	500	A	1600		2.0*/30			500	83/	246
★ MCR159-110		YYR	70		1100	150	3.0	500	A	1600		2.0*/30			500	83/	246
★ MCR159-120		YYR	70		1200	150	3.0	500	A	1600		2.0*/30			500	83/	246
★ MCR201	3	YYR	0.5		15	0.2	1.7	1.2	A	6.0		--			5.0	18/	22
★ MCR202	3	YYR	0.5		30	0.2	1.7	1.2	A	6.0		--			5.0	18/	22
★ MCR203	3	YYR	0.5		60	0.2	1.7	1.2	A	6.0		--			5.0	18/	22
★ MCR204	3	YYR	0.5		100	0.20	1.7	1.2	A	6.0		--			5.0	18/	22
★ MCR205	3	YYR	0.5		150	0.2	1.7	1.2	A	6.0		--			5.0	18/	22
★ MCR206	3	YYR	0.5		200	0.2	1.7	1.2	A	6.0		--			5.0	18/	22
★ MCR235-10	3	YYR	150		100	150	1.6	220	A	1800		2.0*/-			500	-/	220
★ MCR235-20	3	YYR	150		200	150	1.6	220	A	1800		2.0*/-			500	-/	220
★ MCR235-30	3	YYR	150		300	150	1.6	220	A	1800		2.0*/-			500	-/	220
★ MCR235-40	3	YYR	150		400	150	1.6	220	A	1800		2.0*/-			500	-/	220
★ MCR235-50	3	YYR	150		500	150	1.6	220	A	1800		2.0*/-			500	-/	220
★ MCR235-60	3	YYR	150		600	150	1.6	220	A	1800		2.0*/-			500	-/	220
★ MCR235-70	3	YYR	150		700	150	1.6	220	A	1800		2.0*/-			500	-/	220
★ MCR235-80	3	YYR	150		800	150	1.6	220	A	1800		2.0*/-			500	-/	220
★ MCR235-90	3	YYR	150		900	150	1.6	220	A	1800		2.0*/-			500	-/	220
★ MCR235-100	3	YYR	150		1000	150	1.6	220	A	1800		2.0*/-			500	-/	220
★ MCR235-110	3	YYR	150		1100	150	1.6	200	A	1800		2.0*/-			500	-/	220
★ MCR235-120	3	YYR	150		1200	150	1.6	220	A	1800		2.0*/-			500	-/	220
★ MCR235-130	3	YYR	150		1300	150	1.6	200	A	1800		2.0*/-			500	-/	220
★ MCR235-140	3	YYR	150		1400	150	1.6	220	A	1800		2.0*/-			500	-/	220
★ MCR235-150	3	YYR	150		1500	150	1.6	220	A	1800		2.0*/-			500	-/	220
★ MCR235A-10	3	YYR	150		100	150	1.8	220	A	1600		-/10*			500	-/	220
★ MCR235A-20	3	YYR	150		200	150	1.8	220	A	1600		-/10*			500	-/	220
★ MCR235A-30	3	YYR	150		300	150	1.8	220	A	1600		-/10*			500	-/	220
★ MCR235A-40	3	YYR	150		400	150	1.8	220	A	1600		-/10*			500	-/	220
★ MCR235A-50	3	YYR	150		500	150	1.8	220	A	1600		-/10*			500	-/	220
★ MCR235A-60	3	YYR	150		600	150	1.8	220	A	1600		-/10*			500	-/	220
★ MCR235B-10	3	YYR	150		100	150	1.8	220	A	1600		-/15*			500	-/	220
★ MCR235B-20	3	YYR	150		200	150	1.8	220	A	1600		-/15*			500	-/	220
★ MCR235B-30	3	YYR	150		300	150	1.8	220	A	1600		-/15*			500	-/	220
★ MCR235B-40	3	YYR	150		400	150	1.8	220	A	1600		-/15*			500	-/	220
★ MCR235B-50	3	YYR	150		500	150	1.8	220	A	1600		-/15*			500	-/	220
★ MCR235B-60	3	YYR	150		600	150	1.8	220	A	1600		-/15*			500	-/	220
★ MCR235B-70	3	YYR	150		700	150	1.8	220	A	1600		-/15*			500	-/	220
★ MCR235B-80	3	YYR	150		800	150	1.8	220	A	1600		-/15*			500	-/	220
★ MCR235C-10	3	YYR	150		100	150	1.8	220	A	1600		-/20*			500	-/	220
★ MCR235C-20	3	YYR	150		200	150	1.8	220	A	1600		-/20*			500	-/	220
★ MCR235C-30	3	YYR	150		300	150	1.8	220	A	1600		-/20*			500	-/	220
★ MCR235C-40	3	YYR	150		400	150	1.8	220	A	1600		-/20*			500	-/	220
★ MCR235C-50	3	YYR	150		500	150	1.8	220	A	1600		-/20*			500	-/	220
★ MCR235C-60	3	YYR	150		600	150	1.8	220	A	1600		-/20*			500	-/	220
★ MCR235C-70	3	YYR	150		700	150	1.8	220	A	1600		-/20*			500	-/	220
★ MCR235C-80	3	YYR	150		800	150	1.8	220	A	1600		-/20*			500	-/	220
★ MCR235C-90	3	YYR	150		900	150	1.8	220	A	1600		-/20*			500	-/	220
★ MCR235C100		YYR	150		1000	150	1.8	220	A	1600		-/20*			500	-/	220
★ MCR251B-10		YYR	63		100	100	1.7	50	A	1200		-/60*			50	94/	
★ MCR251B-20		YYR	63		200	100	1.7	50	A	1200		-/60*			50	94/	
★ MCR251B-30		YYR	63		300	100	1.7	50	A	1200		-/60*			50	94/	
★ MCR251B-40		YYR	63		400	100	1.7	50	A	1200		-/60*			50	94/	
★ MCR251B-50		YYR	63		500	100	1.7	50	A	1200		-/60*			50	94/	
★ MCR251B-60		YYR	63		600	100	1.7	50	A	1200		-/60*			50	94/	
★ MCR251B-70		YYR	63		700	100	1.7	50	A	1200		-/60*			50	94/	

TYPE NO.		VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts V_{DRM} Volts Max	I_S μA I_{GT} mA Max	V_F or V_T @ Volts	I_F or I_T	UNIT	I_{FM} or I_{FSM} @ t_W Amp	V_O Volts Min t_{on} μs Max	t_{off} μs Max	I_H mA Min	mA Max	PACKAGE To- No.	Case No.
★ MCR251B-80			YYR	63		800	100	1.7	50	A	1200	-/60*			50	94/	
★ MCR251B-90			YYR	63		900	100	1.7	50	A	1200	-/60*			50	94/	
★ MCR251B100			YYR	63		1000	100	1.7	50	A	1200	-/60*			50	94/	
★ MCR251B110			YYR	63		1100	100	1.7	50	A	1200	-/60*			50	94/	
★ MCR251B120			YYR	63		1200	100	1.7	50	A	1200	-/60*			50	94/	
★ MCR251B130			YYR	63		1300	100	1.7	50	A	1200	-/60*			50	94/	
★ MCR251B140			YYR	63		1400	100	1.7	50	A	1200	-/60*			50	94/	
★ MCR251B150			YYR	63		1500	100	1.7	50	A	1200	-/60*			50	94/	
★ MCR251L-10			YYR	63		100	100	1.7	50	A	1200	-/60*			50	83/	
★ MCR251L-20			YYR	63		200	100	1.7	50	A	1200	-/60*			50	83/	
★ MCR251L-30			YYR	63		300	100	1.7	50	A	1200	-/60*			50	83/	
★ MCR251L-40			YYR	63		400	100	1.7	50	A	1200	-/60*			50	83/	
★ MCR251L-50			YYR	63		500	100	1.7	50	A	1200	-/60*			50	83/	
★ MCR251L-60			YYR	63		600	100	1.7	50	A	1200	-/60*			50	83/	
★ MCR251L-70			YYR	63		700	100	1.7	50	A	1200	-/60*			50	83/	
★ MCR251L-80			YYR	63		800	100	1.7	50	A	1200	-/60*			50	83/	
★ MCR251L-90			YYR	63		900	100	1.7	50	A	1200	-/60*			50	83/	
★ MCR251L100			YYR	63		1000	100	1.7	50	A	1200	-/60*			50	83/	
★ MCR251L110			YYR	63		1100	100	1.7	50	A	1200	-/60*			50	83/	
★ MCR251L120			YYR	63		1200	100	1.7	50	A	1200	-/60*			50	83/	
★ MCR251L130			YYR	63		1300	100	1.7	50	A	1200	-/60*			50	83/	
★ MCR251L140			YYR	63		1400	100	1.7	50	A	1200	-/60*			50	83/	
★ MCR251L150			YYR	63		1500	100	1.7	50	A	1200	-/60*			50	83/	
★ MCR320-1		3	YYR	7.0		25	20	2.6	30	A	80				1.0	39/79	
★ MCR320-2		3	YYR	7.0		50	20	2.6	30	A	80	--			20	39/79	
★ MCR320-3		3	YYR	7.0		100	20	2.6	30	A	80	--			20	39/79	
★ MCR320-4		3	YYR	7.0		200	20	2.6	30	A	80	--			20	39/79	
★ MCR320-5		3	YYR	7.0		300	20	2.6	30	A	80	--			20	39/79	
★ MCR320-6		3	YYR	7.0		400	20	2.6	30	A	80	--			20	39/79	
★ MCR320-7		3	YYR	7.0		500	20	2.6	30	A	80	--			20	39/79	
★ MCR320-8		3	YYR	7.0		600	20	2.6	30	A	80	--			20	39/79	
★ MCR380-10		3	YYR	250		100	150	2.4	1.0	K	3500	2.0*/-			500	-/220	
★ MCR380-20		3	YYR	250		200	150	2.4	1.0	K	3500	2.0*/-			500	-/220	
★ MCR380-30		3	YYR	250		300	150	2.4	1.0	K	3500	2.0*/-			500	-/220	
★ MCR380-40		3	YYR	250		400	150	2.4	1.0	K	3500	2.0*/-			500	-/220	
★ MCR380-50		3	YYR	250		500	150	2.4	1.0	K	3500	2.0*/-			500	-/220	
★ MCR380-60		3	YYR	250		600	150	2.4	1.0	K	3500	2.0*/-			500	-/220	
★ MCR380-70		3	YYR	250		700	150	2.4	1.0	K	3500	2.0*/-			500	-/220	
★ MCR380-80		3	YYR	250		800	150	2.4	1.0	K	3500	2.0*/-			500	-/220	
★ MCR380-90		3	YYR	250		900	150	2.4	1.0	K	3500	2.0*/-			500	-/220	
★ MCR380-100		3	YYR	250		1000	150	2.4	1.0	K	3500	2.0*/-			500	-/220	
★ MCR380-110		3	YYR	250		1100	150	2.4	1.0	K	3500	2.0*/-			500	-/220	
★ MCR380-120		3	YYR	250		1200	150	2.4	1.0	K	3500	2.0*/-			500	-/220	
★ MCR380-130		3	YYR	250		1300	150	2.4	1.0	K	3500	2.0*/-			500	-/220	
★ MCR380-140		3	YYR	250		1400	150	2.4	1.0	K	3500	2.0*/-			500	-/220	
★ MCR380-150		3	YYR	250		1500	150	2.4	1.0	K	3500	2.0*/-			500	-/220	
★ MCR380B-10		3	YYR	250		100	150	2.6	1.0	K	3500	-/15*			500	-/220	
★ MCR380B-20		3	YYR	250		200	150	2.6	1.0	K	3500	-/15*			500	-/220	
★ MCR380B-30		3	YYR	250		300	150	2.6	1.0	K	3500	-/15*			500	-/220	
★ MCR380B-40		3	YYR	250		400	150	2.6	1.0	K	3500	-/15*			500	-/220	
★ MCR380B-50		3	YYR	250		500	150	2.6	1.0	K	3500	-/15*			500	-/220	
★ MCR380B-60		3	YYR	250		600	150	2.6	1.0	K	3500	-/15*			500	-/220	
★ MCR380B-70		3	YYR	250		700	150	2.6	1.0	K	3500	-/15*			500	- -	
★ MCR380B-80		3	YYR	250		800	150	2.6	1.0	K	3500	-/15*			500	-/220	
★ MCR380C-10		3	YYR	250		100	150	2.6	1.0	K	3500	-/20*			500	-/220	
★ MCR380C-20		3	YYR	250		200	150	2.6	1.0	K	3500	-/20*			500	-/220	
★ MCR380C-30		3	YYR	250		300	150	2.6	1.0	K	3500	-/20*			500	-/220	
★ MCR380C-40		3	YYR	250		400	150	2.6	1.0	K	3500	-/20*			500	-/220	
★ MCR380C-50		3	YYR	250		500	150	2.6	1.0	K	3500	-/20*			500	-/220	
★ MCR380C-60		3	YYR	250		600	150	2.6	1.0	K	3500	-/20*			500	-/220	
★ MCR380C-70		3	YYR	250		700	150	2.6	1.0	K	3500	-/20*			500	-/220	
★ MCR380C-80		3	YYR	250		800	150	2.6	1.0	K	3500	-/20*			500	-/220	
★ MCR380C-90		3	YYR	250		900	150	2.6	1.0	K	3500	-/20*			500	-/220	
★ MCR380C100			YYR	250		1000	150	2.6	1.0	K	3500	-/20*			500	-/220	
★ MCR380D-10		3	YYR	250		100	150	2.6	1.0	K	3500	-/30*			500	-/220	
★ MCR380D-20		3	YYR	250		200	150	2.6	1.0	K	3500	-/30*			500	-/220	
★ MCR380D-30		3	YYR	250		300	150	2.6	1.0	K	3500	-/30*			500	-/220	
★ MCR380D-40		3	YYR	250		400	150	2.6	1.0	K	3500	-/30*			500	-/220	
★ MCR380D-50		3	YYR	250		500	150	2.6	1.0	K	3500	-/30*			500	-/220	
★ MCR380D-60		3	YYR	250		600	150	2.6	1.0	K	3500	-/30*			500	-/220	

TYPE NO.	VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts / V_{DRM} Volts Max	I_S μA / I_{GT} mA Max	V_F or V_T @ I_F or I_T Volts	UNIT	I_{FM} or I_{FSM} @ t_W Amp	V_O Volts Min t_{on} μs Max	t_{off} μs Max	I_H mA Min	I_H mA Max	PACKAGE To- No.	Case No.
★ MCR380D-70	3	YYR	250		700	150	2.6	1.0 K	3500	-/30*			500	-/220	
★ MCR380D-80	3	YYR	250		800	150	2.6	1.0 K	3500	-/30*			500	-/220	
★ MCR380D-90	3	YYR	250		900	150	2.6	1.0 K	3500	-/30*			500	-/220	
★ MCR380D100		YYR	250		1000	150	2.6	1.0 K	3500	-/30*			500	-/220	
★ MCR380D110		YYR	250		1100	150	2.6	1.0 K	3500	-/30*			500	-/220	
★ MCR380D120		YYR	250		1200	150	2.6	1.0 K	3500	/30*			500	-/220	
★ MCR406-1	3	YYR	4.0		30	0.2	2.2	4.0 A	30	--			3.0	-/90	
★ MCR406-2	3	YYR	4.0		60	0.2	2.2	4.0 A	30	--			3.0	-/90	
★ MCR406-3	3	YYR	4.0		100	0.2	2.2	4.0 A	30	--			3.0	-/90	
★ MCR406-4	3	YYR	4.0		200	0.2	2.2	4.0 A	10	--			3.0	-/90	
★ MCR407-1	3	YYR	4.0		30	0.5	2.6	4.0 A	20	--			5.0	-/90	
★ MCR407-2	3	YYR	4.0		60	0.5	2.6	4.0 A	20	--			5.0	-/90	
★ MCR407-3	3	YYR	4.0		100	0.5	2.6	4.0 A	20	--			5.0	-/90	
★ MCR407-4	3	YYR	4.0		200	0.5	2.6	4.0 A	20	--			5.0	-/90	
★ MCR470-10	3	YYR	300		100	150	1.9	1.0 K	5500	2.0*/-			500	-/220	
★ MCR470-100	3	YYR	300		1000	150	1.9	1.0 K	5500	2.0*/-			500	-/220	
★ MCR470-110	3	YYR	300		1100	150	1.9	1.0 K	5500	2.0*/-			500	-/220	
★ MCR470-120	3	YYR	300		1200	150	1.9	1.0 K	5500	2.0*/-			500	-/220	
★ MCR470-130	3	YYR	300		1300	150	1.9	1.0 K	5500	2.0*/-			500	-/220	
★ MCR470-140	3	YYR	300		1400	150	1.9	1.0 K	5500	2.0*/-			500	-/220	
★ MCR470-150	3	YYR	300		1500	150	1.9	1.0 K	5500	2.0*/-			500	-/220	
★ MCR470-20	3	YYR	300		200	150	1.9	1.0 K	5500	2.0*/-			500	-/220	
★ MCR470-30	3	YYR	300		300	150	1.9	1.0 K	5500	2.0*/-			500	-/220	
★ MCR470-40	3	YYR	300		400	150	1.9	1.0 K	5500	2.0*/-			500	-/220	
★ MCR470-50	3	YYR	300		500	150	1.9	1.0 K	5500	2.0*/-			500	-/220	
★ MCR470-60	3	YYR	300		600	150	1.9	1.0 K	5500	2.0*/-			500	-/220	
★ MCR470-70	3	YYR	300		700	150	1.9	1.0 K	5500	2.0*/-			500	-/220	
★ MCR470-80	3	YYR	300		800	150	1.9	1.0 K	5500	2.0*/-			500	-/220	
★ MCR470-90	3	YYR	300		900	150	1.9	1.0 K	5500	2.0*/-			500	-/220	
★ MCR470C-10	3	YYR	300		100	150	2.3	1.0 K	4500	-/20*			500	-/220	
★ MCR470C-20	3	YYR	300		200	150	.23	1.0 K	4500	-/20*			500	-/220	
★ MCR470C-30	3	YYR	300		300	150	2.3	1.0 K	4500	-/20*			500	-/220	
★ MCR470C-40	3	YYR	300		400	150	2.3	1.0 K	4500	-/20*			500	-/220	
★ MCR470C-50	3	YYR	300		500	150	2.3	1.0 K	4500	-/20*			500	-/220	
★ MCR470C-60	3	YYR	300		600	150	2.3	1.0 K	4500	-/20*			500	-/220	
★ MCR470C-70	3	YYR	300		700	150	2.3	1.0 K	4500	-/20*			500	-	
★ MCR470C-80	3	YYR	300		800	150	2.3	1.0 K	4500	-/20*			500	-/220	
★ MCR470D-10	3	YYR	300		100	150	2.3	1.0 K	4500	-/30*			500	-/220	
★ MCR470D-20	3	YYR	300		200	150	.23	1.0 K	4500	-/30*			500	-/220	
★ MCR470D-30	3	YYR	300		300	150	2.3	1.0 K	4500	-/30*			500	-/220	
★ MCR470D-40	3	YYR	300		400	150	2.3	1.0 K	4500	-/30*			500	-/220	
★ MCR470D-50	3	YYR	300		500	150	2.3	1.0 K	4500	-/30*			500	-/220	
★ MCR470D-70	3	YYR	300		700	150	2.3	1.0 K	4500	-/30*			500	-/220	
★ MCR470D-80	3	YYR	300		800	150	2.3	1.0 K	4500	-/30*			500	-/220	
★ MCR470D-90	3	YYR	300		900	150	2.3	1.0 K	4500	-/30*			500	-/220	
★ MCR470D100		YYR	300		1000	150	2.3	1.0 K	4500	--			500	-/220	
★ MCR470E-10	3	YYR	300		100	150	2.3	1.0 K	4500	-/40*			500	-/220	
★ MCR470E-20	3	YYR	300		200	150	.23	1.0 K	4500	-/40*			500	-/220	
★ MCR470E-30	3	YYR	300		300	150	2.3	1.0 K	4500	-/40*			500	-/220	
★ MCR470E-40	3	YYR	300		400	150	2.3	1.0 K	4500	-/40*			500	-/220	
★ MCR470E-50	3	YYR	300		500	150	2.3	1.0 K	4500	-/40*			500	-/220	
★ MCR470E-60	3	YYR	300		600	150	2.3	1.0 K	4500	-/40*			500	-/220	
★ MCR470E-70	3	YYR	300		700	150	2.3	1.0 K	4500	-/40*			500	-/220	
★ MCR470E-80		YYR	300		800	150	2.3	1.0 K	4500	-/40*			500	-/220	
★ MCR470E-90	3	YYR	300		900	150	2.3	1.0 K	4500	-/40*			500	-/220	
★ MCR470E100		YYR	300		1000	150	2.3	1.0 K	4500	--			500	-/220	
★ MCR470E110		YYR	300		1100	150	2.3	1.0 K	4500	-/40*			500	-/220	
★ MCR470E120		YYR	300		1200	150	2.3	1.0 K	4500	-/40*			500	-/220	
★ MCR490D-60		YYR	300		600	150	2.3	1.0 K	4500	-/30*			500	-/220	
★ MCR550C-10	3	YYR	350		100	150	2.4	1.0 K	5500	/20		50*	500	-/220	
★ MCR550C-20	3	YYR	350		200	150	2.4	1.0 K	5500	-/20		50*	500	-/220	
★ MCR550C-30	3	YYR	350		300	150	2.4	1.0 K	5500	/20*		50*	500	-/220	
★ MCR550C-40	3	YYR	550		400	150	2.4	1.0 K	5500	/20		50*	500	/220	
★ MCR550C-50	3	YYR	350		500	150	2.4	1.0 K	5500	-/20		50*	500	-/220	
★ MCR550C-60	3	YYR	350		600	150	2.4	1.0 K	5500	-/20		50*	500	-/220	
★ MCR550C-70	3	YYR	350		700	150	2.4	1.0 K	5500	-/20		50*	500	-/63	
★ MCR550C-80	3	YYR	350		800	150	2.4	1.0 K	5500	-/20		50*	500	-/220	
★ MCR550C-90	3	YYR	350		900	150	2.4	1.0 K	5500	-/20		50*	500	-/220	
★ MCR550C100		YYR	350		1000	150	2.4	1.0 K	5500	-/20		50*	500	-/220	
★ MCR550D-10	3	YYR	350		100	150	2.4	1.0 K	5500	/30		50*	500	-/220	

TYPE NO.		VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts / V_{DRM} Volts Max	I_S μA / I_{GT} mA Max	V_F or V_T @ Volts	I_F or I_T	UNIT	I_{FM} or I_{FSM} Amp	@ t_W	V_O Volts Min — t_{on} μs Max / t_{off} μs Max	I_H mA Min	I_H mA Max	PACKAGE To- No.	Case No.
★ MCR550D-20		3	YYR	350		200	150	2.4	1.0	K	5500		-/30	50*	500	-/220	
★ MCR550D-30		3	YYR	350		300	150	2.4	1.0	K	5500		/30*	50*	500	-/220	
★ MCR550D-40		3	YYR	550		400	150	2.4	1.0	K	5500		/30	50*	500	/220	
★ MCR550D-50		3	YYR	350		500	150	2.4	1.0	K	5500		-/30	50*	500	-/220	
★ MCR550D-60		3	YYR	350		600	150	2.4	1.0	K	5500		-/30	50*	500	-/220	
★ MCR550D-70		3	YYR	350		700	150	2.4	1.0	K	5500		-/30	50*	500	-/220	
★ MCR550D-80		3	YYR	350		800	150	2.4	1.0	K	5500		-/30	50*	500	-/220	
★ MCR550D-90		3	YYR	350		900	150	2.4	1.0	K	5500		-/30	50*	500	-/220	
★ MCR550D100			YYR	350		1000	150	2.4	1.0	K	5500		-/30	50*	500	-/220	
★ MCR550D110			YYR	350		1100	150	2.4	1.0	K	5500		-/30	50*	500	-/220	
★ MCR550D120			YYR	350		1200	150	2.4	1.0	K	5500		-/30	50*	500	-/220	
★ MCR649-1		3	YYR	20		25	80	0.7	13	A	260		--		-	41/61	
★ MCR649-2		3	YYR	20		50	80	7.0	13	A	260		--		-	41/61	
★ MCR649-3		3	YYR	20		100	80	0.7	13	A	260		--		-	41/61	
★ MCR649-4		3	YYR	20		200	80	0.7	13	A	260		--		-	41/61	
★ MCR649-5		3	YYR	20		300	80	0.7	13	A	260		--		-	41/61	
★ MCR649-6		3	YYR	20		400	80	0.7	13	A	260		--		-	41/61	
★ MCR649-7		3	YYR	20		500	80	0.7	13	A	260		--		-	41/	
★ MCR729-10		3	YYR	2.0		800	50	1.5	2.0	A	100		0.2*/-		15	-/63	
★ MCR729-5		3	YYR	2.0		300	50	1.5	2.0	A	100	10	0.4/20		15	-/63	
★ MCR729-6		3	YYR	2.0		400	50	1.5	2.0	A	100	10	0.4/20		15	-/63	
★ MCR729-7		3	YYR	2.0		500	50	1.5	2.0	A	100		0.2*/-		15	-/63	
★ MCR729-8		3	YYR	2.0		600	50	1.5	2.0	A	100		0.2*/-		15	-/63	
★ MCR729-9		3	YYR	2.0		700	50	1.5	2.0	A	100		0.2*/-		15	-/63	
★ MCR800-10		3	YYR	500		100	150	1.5	1.0	K	7000		4.0*/-		500	-/220	
★ MCR800-20		3	YYR	500		200	150	1.5	1.0	K	7000		--		500	-/220	
★ MCR800-30		3	YYR	500		300	150	1.5	1.0	K	7000		4.0*/-		500	-/220	
★ MCR800-40		3	YYR	800		400	150	1.55	1.0	K	7000		4.0*/		500	/220	
★ MCR800-50		3	YYR	500		500	150	1.5	1.0	K	7000		--		500	-/220	
★ MCR800-60		3	YYR	500		600	150	1.5	1.0	K	7000		--		500	-/220	
★ MCR800-70		3	YYR	500		700	150	1.5	1.0	K	7000		--		500	-/220	
★ MCR800-80		3	YYR	500		800	150	1.5	1.0	K	7000		--		500	-/220	
★ MCR800-90		3	YYR	500		900	150	1.5	1.0	K	7000		--		500	-/220	
★ MCR800-100		3	YYR	500		1000	150	1.5	1.0	K	7000		--		500	-/220	
★ MCR800-110		3	YYR	500		1100	150	1.5	1.0	K	7000		--		500	-/220	
★ MCR800-120		3	YYR	500		1200	150	1.5	1.0	K	7000		--		500	-/220	
★ MCR800-130		3	YYR	500		1300	150	1.5	1.0	K	7000		--		500	-/220	
★ MCR800-140		3	YYR	500		1400	150	1.5	1.0	K	7000		--		500	-/220	
★ MCR800-150		3	YYR	500		1500	150	1.5	1.0	K	7000		--		500	-/220	
★ MCR846-1		3	YYR	2.0		25	50	1.6	2.0	A	30		.50*/4.0*		25	-/63	
★ MCR846-2		3	YYR	2.0		50	50	1.6	2.0	A	30		0.5*/4.0*		2.0	-/63	
★ MCR846-3		3	YYR	2.0		100	50	1.6	2.0	A	30		0.5*/4.0*		25	-/63	
★ MCR846-4		3	YYR	2.0		200	50	1.6	2.0	A	30		0.5*/4.0*		25	-/63	
★ MCR914-1			YYR	1.6		25	8.0	1.4	1.0	A	15				-	5/	
★ MCR914-2			YYR	1.6		50	8.0	1.4	1.0	A	15		0.7*/10*		-	5/	
★ MCR914-3			YYR	1.6		100	8.0	1.4	1.0	A	15		0.7*/10*		-	5/	
★ MCR914-4			YYR	1.6		200	8.0	1.4	1.0	A	15		0.7*/10*		-	5/	
★ MCR914-5			YYR	1.6		300	8.0	1.4	1.0	A	15		0.7*/10*		-	5/	
★ MCR914-6			YYR	1.6		400	8.0	1.4	1.0	A	15		0.7*/10*		-	5/	
★ MCR1336-5		3	YYR	6.0		300	40	2.0	1.0	A	100	3.0	0.15/7.0*	1.0	50	-/63	
★ MCR1336-6		3	YYR	6.0		400	40	2.0	1.0	A	100	3.0	0.15/7.0*	1.0	50	-/63	
★ MCR1336-7		3	YYR	300		500	40	2.0	1.0	A	-		-/7.0*		50	-	
★ MCR1336-8		3	YYR	300		600	40	2.0	1.0	A	-		-/7.0*		50	-/63	
★ MCR1336-9		3	YYR	300		700	40	2.0	1.0	A	-		-/7.0*		50	-/220	
★ MCR1336-10		3	YYR	300		800	40	2.0	1.0	A	-		-/7.0*		50	-/63	
★ MCR1718-5		3	YYR	25		300	50	1.3	25	A	100		--		6.0	48/64	
★ MCR1718-6		3	YYR	25		400	50	1.3	25	A	100		--		6.0	48/64	
★ MCR1718-7		3	YYR	25		500	50	1.3	25	A	100		--		-	48/64	
★ MCR1718-8		3	YYR	25		600	50	1.3	25	A	100		--		-	48/64	
★ MCR1906-1		3	YYR	1.6		25	1.0	1.7	1.0	A	15				5.0	5/31	
★ MCR1906-2		3	YYR	1.6		50	1.0	1.7	1.0	A	15		--		5.0	5/31	
★ MCR1906-3		3	YYR	1.6		100	1.0	1.7	1.0	A	15		--		5.0	5/31	
★ MCR1906-4		3	YYR	1.6		200	1.0	1.7	1.0	A	15		--		5.0	5/31	
★ MCR1907-1		3	YYR	25		25	30	1.7	20	A	150		.50*/12		12	48/64	
D MCR1907-2		3	YYR	25		50	30	1.7	20	A	150		0.5*/12		12	48/64	
★ MCR1907-3		3	YYR	25		100	30	1.7	20	A	150		0.5*/12		12	48/64	
★ MCR1907-4		3	YYR	25		200	30	1.7	20	A	150		0.5*/12		12	48/	
★ MCR1907-5		3	YYR	25		300	30	1.7	20	A	150		0.5*/12		12	48/	
★ MCR1907-6		3	YYR	25		400	30	1.7	20	A	150		0.5*/12		12	48/	
★ MCR2315-1		3	YYR	8.0		25	40	1.6	5.0	A	80		1.0*/15*		50	-/86	

TYPE NO.		VOL.	ID	$I_{F(dc)}$ or $I_{T(RMS)}$ Max	V_S Volts Min	V_S Volts V_{DRM} Max	I_S μA I_{GT} mA Max	V_F or V_T @ Volts	I_F or I_T	UNIT	I_{FM} or I_{FSM} @ t_W Amp		V_O Volts Min t_{on} μs Max	t_{off} μs Max	I_H mA Min	I_H mA Max	PACKAGE To- No.	Case No.
★ MCR2315-2		3	YYR	8.0		50	40	1.6	5.0	A	80		1.0*/15*			50	-/86	
★ MCR2315-3		3	YYR	8.0		100	40	1.6	5.0	A	80		1.0*/15*			50	-/86	
★ MCR2315-4		3	YYR	8.0		200	40	1.6	5.0	A	80		1.0*/15*			50	-/86	
★ MCR2315-5		3	YYR	8.0		300	40	1.6	5.0	A	80		1.0*/15*			50	-/86	
★ MCR2315-6		3	YYR	8.0		400	40	1.6	5.0	A	80		1.0*/15*			50	-/86	
★ MCR2604-1			YYR	8.0		25	20	1.3	5.0	A	100		1.0*/12*			25	-	
★ MCR2604-2			YYR	8.0		50	20	1.3	5.0	A	100		1.0*/12*			25	-	
★ MCR2604-3			YYR	8.0		100	20	1.3	5.0	A	100		1.0*/12*			25	-	
★ MCR2604-4			YYR	8.0		200	20	1.3	5.0	A	100		1.0*/12*			25	-	
★ MCR2604-5			YYR	8.0		300	20	1.3	5.0	A	50		1.0*/12*			25	-	
★ MCR2604-6			YYR	8.0		400	20	1.3	5.0	A	100		1.0*/12*			25	-	
★ MCR2604-7			YYR	5.0		500	50	-	-	-	100		1.0*/15*			60	-	
★ MCR2604-8			YYR	5.0		600	50	-	-	-	100		1.0*/15*			60	-	
★ MCR2605-1			YYR	8.0		25	20	1.3	5.0	A	100		1.0*/12*			25	-	
★ MCR2605-2			YYR	8.0		50	20	1.3	5.0	A	100		1.0*/12*			25	-	
★ MCR2605-3			YYR	8.0		100	20	1.3	5.0	A	100		1.0*/12*			25	-	
★ MCR2605-4			YYR	8.0		200	20	1.3	5.0	A	100		1.0*/12*			25	-	
★ MCR2605-5			YYR	8.0		300	20	1.3	5.0	A	50		1.0*/12*			25	-	
★ MCR2605-6			YYR	8.0		400	20	1.3	5.0	A	100		1.0*/12*			25	-	
★ MCR2605-7			YYR	5.0		500	50	-	-	-	100		1.0*/15*			60	-	
★ MCR2605-8			YYR	5.0		600	50	-	-	-	100		1.0*/15*			60	-	
★ MCR2614L1			YYR	8.0		25	40	1.6	5.0	A	80		1.0*/15*			50	-/87L	
★ MCR2614L2			YYR	8.0		50	40	1.6	5.0	A	80		1.0*/15*			50	-/87L	
★ MCR2614L3			YYR	8.0		100	40	1.6	5.0	A	80		1.0*/15*			50	-/87L	
★ MCR2614L4			YYR	8.0		200	40	1.6	5.0	A	80		1.0*/15*			50	-/876	
★ MCR2614L5			YYR	8.0		300	40	1.6	5.0	A	80		1.0*/15*			50	-/876	
★ MCR2614L6			¥YR	8.0		400	40	1.6	5.0	A	80		1.0*/15*			50	-/876	
★ MCR3735-3			YYR	35		100	40	1.2	35	A	325		1.0*/15*			50	-/175	
★ MCR3818-1		3	YYR	16		25	40	1.2	20	A	240		1.0*/15*			-	-/174	
★ MCR3818-2		3	YYR	16		50	40	1.2	20	A	240		1.0*/15*			50	-/174	
★ MCR3818-3		3	YYR	16		100	40	1.2	20	A	240		1.0*/15*			50	-/174	
★ MCR3818-4		3	YYR	16		200	40	1.2	20	A	240		1.0*/15*			50	-/174	
★ MCR3818-5		3	YYR	16		300	40	1.2	20	A	240		1.0*/15*			50	-/174	
★ MCR3818-6		3	YYR	16		400	40	1.2	20	A	240		1.0*/15*			50	-/174	
★ MCR3818-7		3	YYR	16		500	40	1.2	20	A	240		1.0*/15*			50	-/174	
★ MCR3818-8		3	YYR	16		600	40	1.2	20	A	240		1.0*/15*			50	-/174	
★ MCR3835-1		3	YYR	35		25	40	1.2	35	A	325		1.0*/15*			50	-/174	
★ MCR3835-2		3	YYR	35		50	40	1.2	35	A	325		1.0*/15*			50	-/174	
★ MCR3835-3		3	YYR	35		100	40	1.2	35	A	325		1.0*/15*			50	-/174	
★ MCR3835-4		3	YYR	35		200	40	1.2	35	A	325		1.0*/15*			50	-/174	
★ MCR3835-6		3	YYR	35		400	40	1.2	35	A	325		1.0*/15*			50	-/174	
★ MCR3835-7		3	YYR	35		500	40	1.2	35	A	325		1.0*/15*			50	-/174	
★ MCR3835-8		3	YYR	25		600	40	1.2	35	A	325		1.0*/15*			50	-/174	
★ MCR3918-1		3	YYR	16		25	40	1.2	20	A	240		1.0*/15*			50	-/175	
★ MCR3918-2		3	YYR	16		50	40	1.2	20	A	240		1.0*/15*			50	-/175	
★ MCR3918-3		3	YYR	16		100	40	1.2	20	A	240		1.0*/15*			50	-/174	
★ MCR3918-4		3	YYR	16		200	40	1.2	20	A	240		1.0*/15*			50	-/175	
★ MCR3918-5		3	YYR	16		300	40	1.2	20	A	240		1.0*/15*			50	-/175	
★ MCR3918-6		3	YYR	16		400	40	1.2	20	A	240		1.0*/15*			50	-/175	
★ MCR3918-7		3	YYR	16		500	40	1.2	20	A	240		1.0*/15*			50	-/175	
★ MCR3918-8		3	YYR	16		600	40	1.2	20	A	240		1.0*/15*			50	-/175	
★ MCR3935-1		3	YYR	35		25	40	1.2	35	A	325		1.0*/15*			50	-/175	
★ MCR3935-2		3	YYR	35		50	40	1.2	35	A	325		1.0*/15*			50	-/175	
★ MCR3935-4		3	YYR	35		200	40	1.2	35	A	325		1.0*/15*			50	-/175	
★ MCR3935-6		3	YYR	35		400	40	1.2	35	A	325		1.0*/15*			50	-/175	
★ MCR3935-7		3	YYR	35		500	40	1.2	35	A	325		1.0*/15*			50	-/175	
★ MCR3935-8		3	YYR	25		600	40	1.2	35	A	325		1.0*/15*			50	-/175	
★ MPT20		3	YXB		16	24	100	-	-		-	-	--		-	-	/182	
★ MPT28		3	YXB		24	32	50	-	-		-	-	--		-	-	/182	
★ MPT32		3	YXB		28	36	50	-	-		-	-	--		-	-	/182	
★ MUS4987		3	YXR		6.0	10.0	500	1.5			6.0	10	--			1.5	92/29	
★ MUS4988		3	YXR		7.5	9.0	150	1.5			6.0	10	--			0.5	92/29	
★ M4L3052			YXR		8.0	10									1.0	20	7/51	
★ M4L3053			YXR		9.0	11									1.0	20	7/51	
★ M4L3054			YXR		10	12		1.5	.15		-	-	--		1.0	20	7/51	

2N...3N...and 4N...JEDEC Registered Devices

and Motorola Non-Registered Devices

3

Index	Table No.	Page No.
Master 2N. . . Number Index and Short-form Specifications (also 3N. . . and 4N. . . numbers)		
Junction Transistors (Bipolar)	7	3-2
Unijunction Transistors	8	3-96
Field-Effect Transistors	9	3-100
Optoelectronic Detectors and Couplers	10	3-110

TABLE 7 - JUNCTION TRANSISTORS

A master numerical index for all registered 2N. . ., 3N. . ., and 4N. . ., type numbers. In addition, short-form specifications for both registered and Motorola non-registered junction (bipolar) transistors are provided. Specifications for other discrete semiconductor devices are shown in other tables. See the complete index on Page 3-1.

In this table, to facilitate comparison, non-conforming specifications have been converted to conform to those chosen. Conversion methods and preference of characteristics are indicated in the key. Some columns show 2 different types of data indicated by either **bold** or *italic* typefaces. See key and headings.

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / NF dB Max @ f / $V_{CE\ (sat)}$ Volts @ I_C & I_B Max	Unit	PACKAGE To- No.	Case No.

Alphanumeric listing type numbers

★Available from Motorola

D-Discontinued type not available from any manufacturer

Type number of recommended replacement or of nearest electrical equivalent

Data Library Volume where complete specifications are located.

Identification Code

1st Letter: Material
- G—Germanium
- S—Silicon

2nd Letter: Polarity
- C—both types in multiple device
- N—NPN
- P—PNP

3rd Letter: Use
- A—General Purpose Amplifier
- C—Chopper
- E—Low Noise Audio Amplifier
- F—Low Noise RF Amplifier
- G—General Purpose Amplifier and Switch
- H—Tuned RF/IF Amplifier
- I—Current Mode Switch
- L—Light Sensitive
- M—Differential Amplifier
- O—Oscillator
- P—Power Amplifier, Tuned RF
- S—High Speed Switch
- V—Avalanche Mode Switch
- X—Mixer

Other Codes
- FET—Field-Effect Transistor
- OPT—Optoelectronic Device
- R-A—Reference Amplifier
- UJT—Unijunction Transistor

ID Codes for multiple devices are shown in bold face type.

Power Dissipation-Normally specified at 25°C but occasionally specified at higher temps. Multiple devices show a single die rating.
Ref. Point: A-Ambient temperature
C-Case temperature

Rated maximum Collector-Emitter Voltage. Subscript letter identifies base termination listed below in order of preference.

SUBSCRIPT:
- O—V_{CEO}, open
- R—V_{CER}, resistance only
- X—V_{CEX}, reverse bias and resistance
- V—V_{CEV}, reverse bias only
- S—V_{CES}, shorted
- U—V_{CE}, unidentified
- B—V_{CBO}, Collector-Base Voltage, emitter open

Continuous (DC) Collector Current

Common-emitter DC Current Gain. When not specified h_{fe} (ac gain) is shown or h_{FE} is calculated from: h_{FB}, common base dc gain, h_{fb}, common base ac gain, or from the I_C and I_B values used for a saturation voltage test. Units for test current:
- A—ampere
- m—mA
- u—μA

Current-Gain-Bandwidth Product. When specified, indicated by T. When f_T is not specified, the actual specification is indicated by a letter code and f_T is computed as follows:
B: f_{ab}, $f_T = f_{ab} \times 0.8$
E: f_{ae}, $f_T = f_{ae} \times$ (h_{FE} or h_{fe}) min
M: f_{max} is shown as specified

Output Capacitance, common-base. Shown without distinction:
C_{cb} — Collector-Base Capacitance
C_{re} — Common-Emitter Reverse Transfer Capacitance

P_{out} — Output Power — RF Power Amplifiers

ΔV_{BE} — Differential Base Voltage ($V_{BE1} - V_{BE2}$)- Differential Amplifiers

t_{on} — turn-on time
t_{off} — turn-off time

G_p — Power Gain
NF — Noise Figure
f — Test Frequency
AUD — 10-15k Hz
Frequency Units:
H-Hertz
K-kHz
M-MHz
G-GHz

$V_{CE(sat)}$ — Collector-Emitter Saturation Voltage
I_C — Test Current
Current Units:
u—μA
m—mA
A—Amp

JEDEC Outline/ Motorola Package Outline

* Denotes Typical

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF @ f dB Max			Unit	PACKAGE To-Case No. No.
															t_{on} ns Max	t_{off} ns Max	$V_{CE(sat)}$ Volts Max	@ I_C/I_B	& I_C			
D 2N21			GPA	0.12	A	100	B															
D 2N22			GPA	.145	A	100	O	0.02														
D 2N23			GPA	.105	A	50	O	0.04														
D 2N24			GPA	.145	A	30	O	0.02														
D 2N25			GPA	0.2	A	50	O	0.02				2.4	B									
D 2N26			GPA	0.09	A	40	O	0.04														
D 2N27			GNE	0.05	A	35	B		19	1.0 m		0.8	B					30				
D 2N28			GNE	0.05	A	30	B		16	0.5 m		0.4	B					30				
D 2N29			GNE	0.05	A	35	B		24	1.0 m		0.8	B					30				
D 2N30			GPA	0.1	A	35	B	.007														
D 2N31			GPA	0.1	A	35	B	.007				2.4	B									
D 2N32			GPA	0.05	A	40	B	.008				2.2	B				21					
D 2N32A			GPA	0.05	A	40	B															
D 2N33			GPA	0.03	A	8	B	.007														
2N34	2N1191		GPA	0.05	A	25	B	.008														
2N34A			GPA	0.05	A	25	B	.008														
2N35			GPA	0.05	A	25	B	.008														
2N35A			GNA																			
2N36	2N1191		GPA	0.05	A	20	V										40					
2N37	2N1191		GPA	0.05	A	20	V										36					
2N38	2N1191		GPA	0.05	A	20	V										32					
D 2N38A			GPA	0.05	A	20		.008									34		1000	H		
2N43A	2N525		GPE	.240	A	30	O	0.3	34	20 m		0.4	B					20	1000	H		
2N44	2N524		GPE	.240	A	30	O	0.3	18	20 m		0.4	B					15	1000	H		
2N45	2N524		GPA	.240	A	30	O	0.3	18	20 m		0.4	B									
D 2N46			GPA	.050	A	25	B															
D 2N47	2N1191		GPE	.050	A	35	B	0.02	39	1.0 m								25	1000	H		
D 2N48			GPE	.050	A	35	B	0.02	32	1.0 m								25	1000	H		
D 2N49	2N1191		GPE	.050	A	35	B	0.02	39									15	1000	H		
D 2N50			GA	.050	A	15	B	.001									20					
D 2N51			GA	0.1	A	50	B	.008									20					
D 2N52			GA	0.12	A	50	B	.008									20					
D 2N53			GA	0.1	A	50	B	.008									20					
D 2N54	2N1191		GPA	0.2	A	45	B	0.01	19	1.0 m												
D 2N55	2N1191		GPA	0.2	A	45	B	0.01	12	1.0 m												
D 2N56	2N1191		GPA	0.2	A	45	B	0.01	9	1.0 m												
D 2N57			GPA	20	C	60	B	0.8														
2N59	2N1193		GPA	.180	A	25	O	0.2									30					
2N59A	2N1193		GPA	.180	A	40	O	0.2									30					
2N59B	2N1193		GPA	.180	A	50	O	0.2									30					
2N59C	2N1193		GPA	.180	A	60	O	0.2									30					
2N60	2N1193		GPA	.180	A	25	O	0.2									28					
2N60A	2N1193		GPA	.180	A	40	O	0.2									28					
2N60B	2N1193		GPA	.180	A	50	O	0.2									28					
2N60C	2N1193		GPA	.180	A	60	O	0.2									28					
2N61	2N1192		GPA	.180	A	25	O	0.2									26					
2N61A	2N1191		GPA	.180	A	40	O	0.2									26					
2N61B	2N1191		GPA	.180	A	50	O	0.2									26					
2N61C	2N1191		GPA	.180	A	60	O	0.2									26					
D 2N62	2N1191		GPA	.050		35	B	0.02														
2N63	2N1191		GPA	.102	A	44	S	0.01														
2N64	2N1191		GPA	.102	A	30	S	0.01									22		1000	H		
2N65	2N1193		GPA		A	24	S	0.01									20		1000	H		
D 2N66			GPA	27.5	C	40		0.8														
D 2N67			GCA	0.1	A	50	B															
D 2N68			GPA	2.0	A	25	B															
D 2N71			GPA	1.0	A	50	U	0.25														
D 2N72			GPA	.050	A	40	B															
D 2N73			GPC	0.2	A	50	U	.015														
D 2N74			GPA	0.2	A	50	U	0.05														
D 2N75			GPA	0.2	A	20	U															
D 2N76	2N319		GPA	.005	J	20	B	0.01				0.4	B									
2N77	2N1191		GPA	.035	A	25	B	.015														
2N78			GNA	.065	A	15	O	0.02	45	1.0 m		4.0	B				29		1000	H		
2N78A			GNA	.065	A	15	O	0.02	45	1.0 m		4.0	B									
D 2N79	2N1191		GPA	.035	A	35	B															
D 2N80			GPA	.050	A	25	U	.008														
D 2N81	2N1191		GPE	.050	A	20	O	.015	20	1.0 m								25				
D 2N82	2N1191		GPE	.035	A	20	O	0.15	20	1.0 m								25				
2N94			GNA	0.03	A	20	B	.005	20	1.0 m		1.6	B									

	TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	t_{on} ns Max	ΔV_{BE} mV Max	t_{off} ns Max	Gp dB Min	$V_{CE(sat)}$ Volts Max	NF dB Max	I_C @ I_B	@ f & I_C	Unit	PACKAGE To-Case No.	No.
	2N94A			GNA	0.03	A	20	B	.005	20	1.0	m	4.0	B										1000	H		
	2N95			GNA	2.5	A	25	B	1.5																		
D	2N96			GPA	.050	A	30	B	0.02				0.4	B													
	2N97			GNE	.050	A	30	B	0.01	6	1.0	m	0.4	B	25	*200/300*						30					
	2N97A			GNE	.050	A	40	B	0.01	13	1.0	m	0.4	B	25	*200/300*						25					
	2N98			GNE	.050	A	40	B	0.01	19	1.0	m	0.64	B	25	*200/300*						20					
	2N98A			GNE	.050	A	40	B	0.01	24	1.0	m	0.64	B	25	*200/300*						25					
	2N99			GNE	.050	A	40	B	0.01	19	1.0	m	1.6	B	20	*200/300*						25					
D	2N100			GNE	.025	A	25	B	.005	99	1.0	m	2.0	B	20	*200/300*						30					
D	2N101			GPA	1.0	A	25	B	1.5																		
D	2N102			GNA	1.0	A	25	B	1.5																		
	2N103			GNE	.050	A	35	B														22					
	2N104	2N650		GPE	.150	A	30	B	0.05													12					
	2N105			GPA	.035	A			.015																		
	2N106	2N1191		GPE	.102	A	6	U	0.01	25	0.5	m										12		1000	H		
	2N107	2N464		GPA	.050	A	6	O	0.01																		
	2N108			GPA	0.05	A			.015																		
	2N109	2N1192		GPA	.165	A	25	O	0.15	65	50	m								*.15*				*50*	*m*		40/
D	2N110			GPA	0.2	A	50	B	0.04											*2.5*				*18*	*m*		
	2N111			GPE	.150	A	15	O	0.2	15	1.0	m										25					
	2N111A			GPA	.150	A	15	O	0.2	15	1.0	m															
	2N112			GPE	.150	A	15	O	0.2	15	1.0	m										25					
	2N112A			GPA	.150	A	15	O	.215		1.0	m															
	2N113			GPA	.096	A	10	B	.005																		
	2N114			GPA	.096	A	10	B	.005																		
D	2N115			GPA	50	C	32	R			30	m															
	2N117			SNA	.150	C	30	B	.025				0.8	B													
	2N118			SNA	.150	C	30	B	.025				1.6	B													
	2N118A			SNA	.150	C	45	B	.025																		
	2N119			SNA	.150	C	30	B	.025				1.6	B													
	2N120			SNA	.150	C	45	B		76																	
	2N122			SNA	8.75	C	120	B		3	100	m															
	2N123			GPA	0.05	C	15	O	.125				4.0	B													
	2N124			GNA	0.05	A	10	B	.008	12	5.0	m	0.3	T						*.3*				*5.0*	*m*		
	2N125			GNA	0.05	A	10	B	.008	24	5.0	m	5.0	T						*.3*				*5.0*	*m*		
	2N126			GNA	0.05	A	10	B	.008	48	5.0	m	5.0	T						*.3*				*5.0*	*m*		
D	2N127			GNE	0.05	A	10	B	.008	100	5.0	m	5.0	T								20					
	2N128			GPE	0.03	A			.005				45	M								20					
	2N129			GPE	0.03	A			.005				30	M								20					
	2N130	2N1191		GPA	.085	A	44	B	0.01																		
	2N130A	2N650		GPA	0.1	A	40	O	0.1																		
	2N131	2N1192		GPA	.085	A	30	B	0.01																		
	2N131A	2N651		GPA	0.1	A	30	O	0.2																		
	2N132	2N1192		GPA	.085	A	24	B	0.01																		
	2N132A	2N651		GPA	0.1	A	20	O																			
	2N133	2N1192		GPA	.085	A	30	B	0.01																		
	2N133A	2N651		GPA	0.1	A	20	O																			
	2N135			GPA	0.1	A	12	R					3.6	B													
	2N136			GPA	0.1	A	12	R					5.2	B													
	2N137			GPA	0.1	A	6	R					8.0	B													
	2N138			GPA	0.05	A	24	B	0.02																		
D	2N138A			GPA	0.15	A	30	O	0.1	10	50	m															
D	2N138B			GPA	0.1	A	30	O	0.1																		
	2N139			GPA	.035	A	16	B	.015																		
	2N140			GPA	.035	A	16	B	.015																		
D	2N141			GPA	1.5	A	30	O	0.8																		
D	2N142			GNA	1.5	A	30	O	0.8	11	.25	A															
D	2N143			GPA	1.0	A	30	O	0.8																		
D	2N144			GNA	1.0	A	30	O	0.8																		
	2N145			GNA	.065	A	20	U	.005																		
	2N146			GNA	.065	A	20	U	.005																		
	2N147			GNA	.065	A	20	U	.005																		
D	2N148			GNA	.065	A	16	U	.005																		
D	2N148A			GNA	.065	A	32	U	.005																		
D	2N149			GNA	.065	A	16	U	.005																		
D	2N149A			GNA	.065	A	32	U	.005																		
D	2N150			GNA	.065	A	16	U	.005																		
D	2N150A			GNA	.065	A	32	U	.005																		
	2N155	2N3611		GPA	85	A	30	B	3.0	24	0.5	A								*.65*				*.5*	*A*		
	2N156	2N3611		GPA	8.5	A	30	B	3.0	24	0.5	A	0.116	B						*.6*				*1.0*	*A*		

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / @ I_C/I_B	& I_C	Unit	PACKAGE To-Case No.
D 2N157	2N3615		GPA	1.5	A	60	B	3.0	20	0.5	A	0.08	B								3/
D 2N157A	2N3616		GPA	1.5	A	90	B	3.0	20	0.5	A	0.08	B								3/
2N158	2N3615		GPA	8.5	A	60	B	3.0	21	0.5	A	0.116	B				.75		1.0	A	
2N158A	2N2141		GPA	1.5	A	60	O	3.0	21	0.5	A	0.084	E				.75		1.0	A	
2N160			SNA	0.15	A	40	B	.025	9												
2N160A			SNA	0.15	A	40	B	.025	9												
2N161			SNA	0.15	A	40	B	.025	19												
2N161A			SNA	0.15	A	40	B	.025	19												
2N162	2N2221		SNA	0.15	A	40	B	.025	19												
2N162A	2N2221		SNA	0.15	A	40	B	.025	19												
2N163	2N2221		SNA	0.15	A	40	B	.025	39												
2N163A	2N2221		SNA	0.15	A	40	B	.025	39												
2N166			GNA	.025	A	6.0	O	0.02													
2N167			GNA	.075	A	30	O	.075				4.0	B								
2N167A			GNA	.075	A	30	O		17	8.0	m	4.0	B								
2N168			GNA	.055	A	15	O	0.02									28				
2N168A			GNA	.065	A	15	O	0.02									28				
2N169			GNA	.055	A	15	O	0.02									21				
2N169A			GNA	.055	A	25	O	0.02									25				
2N170			GNA	.025	A	6	O	0.02													
2N172			GNA	.065	A	16	U	.005													
★ 2N173		1	GPG	170	C	50	S		35	5.0	A				15K/15K		1.0		12	A	36/5
★ 2N174		1	GPG	100	C	70	S		25	5.0	A				152/15K		.9		12	A	36/5
2N174A			GPG	100	C	70	S	15	40	1.2	A	0.08	B		15K/15K		.7		12	A	
2N175	2N1192		GPA	0.05	A	10	B	.002													
★ 2N176		1	GPA	90	C	30	R	3.0	25	0.5	A	0.1	E				34		1000	H	
★ 2N178		1	GPA	10	C	30	R	3.0	15	0.5	A	0.175	E				28		1000	H	3/
D 2N179	2N3611		GPA	0.3	C			0.06									32				
2N180	2N1192		GPA	0.15	A	30	B														
2N181	2N1192		GPA	0.25	A	30	B														
2N182			GNA	0.1	A	25	B														
2N183			GNA	0.1	A	25	B														
2N184			GNA	0.1	A	25	B														
2N185	2N650		GPA	.150	A	20	B	.150													
2N186	2N1191		GPA	.075	A	25	R	0.2				0.64	B								
2N186A	2N1191		GPA	0.18	A	25	R	0.2				0.64	B								
2N187	2N1191		GPA	.075	A	25	R	0.2				0.8	B								
2N187A	2N1191		GPA	0.18	A	25	R	0.2				0.8	B								
2N188	2N1191		GPA	.075	A	25	R	0.2				0.96	B								
2N188A	2N1191		GPA	0.18	A	25	R	0.2				0.96	B								
2N189	2N1191		GPA	.075	A	25	R	0.05				0.64	B								
2N190	2N1191		GPA	.075	A	25	R	0.05				0.8	B								
2N191	2N1192		GPA	.075	A	25	R	0.05				0.96	B								
2N192	2N1193		GPA	.075	A	25	R	0.05				1.2	B				1.0		1.0	A	
2N193			GNA	0.15	A	18	R	0.1	10	1.0	m	1.6	B	15							22/
2N194			GNE	0.05	A	15	R					1.6	B				15	20			
2N194A			GNA	0.05	A	20	R					1.6	B								
2N206			GPA	.075	A	30	B														
2N207	2N1191		GPE	0.05	A	12	V	0.02										15			
2N207A	2N1193		GPE	0.05	A	12	V	0.02										10			
2N207B	2N1190		GPE	0.05	A	12	V	0.02										5.0			
2N211			GNA	0.05	A	10	R					2.0M	E								22/
2N211U	2N5631		SNG	250	C	150	V	30	10	10	A				20K/25K						
2N212			GNA	0.15	A	18	R	0.1	10	1.0	m	3.2	B								
2N213			GNA	0.05	A	25	R	0.1	80	1.0	m	2.4	B				.6		100	m	
2N213A			GNA	0.18	A	25	R	0.1					E	10			1.0		100	m	
2N214			GNA	.125	A	40	B		50	35	m	0.48	B								
2N215	2N1189		GPA	0.15	A	30	B														
2N216			GNA	0.05	A	15	U					1.6	B								
2N217	2N1192		GPA	0.15	A	25	O		65	50	m						.15		50	m	
2N218			GPA	.035	A	16	B	.015													
2N219			GPA	.035	A	16	B	.015													
2N220	2N1189		GPA	0.02	A	10	B	.002													
2N223	2N1193		GPA	0.1	A	18	V	0.15													
2N224	2N1192		GPA	0.25	A	25	B	0.15	60	100	m						.25		100	m	
2N225	2N1193		GPA	0.25	A	25	B	0.15	60	100	m						.25		100	m	
2N226	2N1192		GPA	0.25	A	30	B	0.15	35	100	m						.25		100	m	
2N227	2N1192		GPA	0.25	A	30	B	0.15	35	100	m						.25		100	m	
2N228			GPA	0.05	A	25	U		50	35	m	0.48	B								
2N229			GNA	0.05	A	12	U	0.04				0.44	B								

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / @ I_C/I_B	& I_C	Unit	PACKAGE To-Case No. No.
D 2N230			GPA	15	C	30	U	2.0	60	0.5	A	0.72	E				.8		2.0	A	
2N231			GPA	.009	A	4	V					30M	M								
D 2N232			GPA	.009	A	4	V					20M	M								
2N233			GNA	0.05	A	10	B														
2N233A			GNA	0.05	A	10	B														
D 2N234	2N3611		GPA	25	C	25	R	3.0													
2N234A	2N3611		GPA	25	C	25	R	3.0													
D 2N235	2N3611		GPA	25	C	40	U	3.0									.8		1.0	A	
2N235A			GPA	25	C	40	U	3.0									.8		1.0	A	
2N235B			GPA	30	C	35	R	3.0	10	1.0	A	0.05	E				.8		1.0	A	
D 2N236	2N3612		GPA			35	R										1.0		3.0	A	
2N236A	2N3612		GPA	25	C	35	R		40	.75	A						1.0		3.0	A	
2N236B	2N3612		GPA	35		35	R	3.0				0.05	E				1.0		3.0	A	
2N237			GPE	0.15	A	45	B	0.02				0.4	B				42	10	1000	H	
2N238	2N1192		GPA	0.05	A	20	B														
2N240			GPA	.025	A	6	S	.015				25	T				.1		8.0	m	
2N241	2N321		GPA	0.1	A	25	R	0.2				1.04	B								
2N241A	2N321		GPA	0.18	A	25	R	0.2				1.04	B								
★ 2N242		1	GPA	2.0	C	45	R	5.0	30	500	m	0.15	E								3/
2N243			SNA	0.75	C	60	B														
2N244			SNA	0.75	C	60	B														
D 2N247			GPA	0.08	A	40	B														
D 2N248			GPA			25	B														
2N249			GPA	0.35	A	25	B	0.2													
2N250	2N3611		GPA	12	C	30	B	2.0	30	500	m	0.24	E								
2N250A	2N3611		GPA	90	C	35	V	7.0	25	3.0	A	0.2	T								3/
2N251	2N3612		GPA	12	C	60	B	2.0	30	500	m	0.24	E								
2N251A	2N3616		GPA	90	C	55	V	7.0	25	3.0	A	0.2	T								3/
2N252			GPA	.065	C	16	O	.005													
2N253			GNA	.065	C	12	O	.005													
2N254			GNA	.065	C	20	O														
2N255			GPA	1.5	A	15	B	3.0													3/
2N255A			GPA	20	C	15	R	4.0													
2N256	2N3611		GPA	1.5	A	30	B	3.0													3/
2N256A	2N178		GPA	20	C	25	R	4.0													
2N257			GPA	25	C	40	B														
D 2N258			SPE	0.25	A	30	O	0.05						40				25	1000	H	
D 2N259			SPE	0.25	A	30	O	0.05						40				25	1000	H	
D 2N260			SPA	0.2	A	10	B	0.05													
D 2N260A			SPA	0.2	A	30	B	0.05													
D 2N261			SPA	0.2	A	75	B	0.05													
D 2N262			SPA	0.2	A	10	B	0.05													
D 2N262A			SPA	0.2	A	30	B	0.05													
2N263			SNA	0.15	A	30	O	0.02	45	10	m	16	B				1.5		10	m	
2N264			SNA	.125	A	30	O	0.02	20	10	m	8.0	B				1.5		10	m	
2N265	2N1175		GPA	.075	A	25	R	0.05				1.2	B								
D 2N266			GPA	.075	A	18	R	0.2				0.64	B								
D 2N267			GPA	0.08	A	85	B														
2N268	2N3615		GPA	25	C	85	B														
2N268A			GPA	10	C	60	V		20	2.0	A										
2N269			GPA	0.12	A	24	O	0.1													
2N270	2N1193		GPA	0.15	A	25	B	.075													
2N271			GPA	0.15	A	10	O	0.2													
2N271A			GPA	0.15	A	10	O	0.2													
2N272			GPA	0.15	A	24	O	0.1													
2N273			GPA	0.15	A	25	S	0.1	30	50	m										
2N274			GPA	0.12	A	40	O	0.01	20	1.5	m										
★ 2N277		1	GPA	70	C	40	S		35	5.0	A										36/5
★ 2N278		1	GPA	70	C	45	S		35	5.0	A						1.0		12	A	36/5
2N279	2N650		GPA	.125	A	20	O	0.01				024	B								
2N280	2N650		GPA	.125	A	20	O	0.01													
2N281	2N651		GPA	.167	C	16	R	0.05	45			0.28	B								
2N282	2N651		GPA	.167	C	16	R	0.05													
2N283	2N650		GPA	.125	A	20	B	0.01													
2N284			GPA	.125	A	32	B	.125	15			0.28	B								
2N284A			GPA	.125	A	60	B	.125	15			0.28	B								
D 2N285	2N3617		GPA	25	C	35	R														
2N285A			GPA	25	C	35	R										.5		1.0	A	
D 2N290			GPA	55	C	70	B	12													
2N291	2N1191		GPA	.180	A	25	B														

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	@ I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / @ I_C & I_B	I_C	Unit	PACKAGE To-Case No. No.
2N292			GNA	.065	A	15	O	0.02	6												
2N293			GNA	.065	A	15	O	0.02	6												
2N296	2N3615		GPA	20	C	60	B	2.0	19	1.0 A		0.08	E				1.0		1.0	A	
2N297	2N297A		GPA	35	C	50	S	5.0	40	0.5 A		0.2	E				1.0		2.0	A	
★ 2N297A		1	GPA	35	C	50	S	5.0	40	0.5 A		0.2	E				1.0		2.0	A	3/
D 2N299			GPA	0.02	A	4	V					90	M								
D 2N300			GPA	0.02	A	4	V					85	M								
2N301			GPA	11	C	40	B	1.5	70	1.0 A											3/
2N301A			GPA	11	C	60	B	1.5	70	1.0 A											3/
2N302			GPA	0.15	A	10	O	0.2				5.6	B								
2N303			GPA	0.15	A	10	O	0.2				11.2	B								
2N306			GNA	0.05	A	15	R					0.48	B								
★ 2N307		1	GPA	25	C	35	R	1.0	20	0.2 A		0.06	E				.5		.1	A	
★ 2N307A		1	GPA	25	C	35	R	2.0	20	0.2 A		0.07	E				1.0		.2	A	3/
2N308			GPA	0.03	A	20	O										.8		1.0	A	3/
2N309			GPA	0.03	A	20	O														
2N311			GPA	.075	A	15	O		25	10 m							.07		10	m	
2N312			GNA	.075	A	15	O		25	10 m							.07		10	m	
2N315			GPA	0.1	A	15	O		15	100 m							.15		100	m	
2N315A			GPA	0.15	A	20	O	0.5	20	100 m							.15		100	m	5/
D 2N315B			GPS	0.15	A	20	O	0.5	20	100 m					1.2/1.6						5/
2N316			GPA	0.1	A	10	O	0.5	20	200 m							.18		200	m	
2N316A			GPS	0.15	A	15	O		20	200 m					0.7/0.15		.18		200	m	5/
2N317			GPA	0.1	A	6	O	0.5	20	400 m							.2		400	m	
2N317A			GPS	0.15	A	10	O		20	400 m					0.6/0.12		.2		400	m	5/
★ 2N318			OPT	Table 10																	
★ 2N319		1	GPA	.225	A	20	R	0.5	25	20 m				35							5/31
★ 2N320		1	GPA	.225	A	20	R	0.5	34	20 m				35							5/31
★ 2N321		1	GPA	.225	A	20	R	0.5	53	20 m				35							5/31
★ 2N322		1	GPA	0.14	A	18	R	0.5	34	20 m		0.8	B	35							5/31
★ 2N323		1	GPA	0.14	A	18	R	0.5	53	20 m		1.2	B	35							5/31
★ 2N324		1	GPA	0.14	A	18	R	0.5	72	20 m		1.6	B	35							5/31
D 2N325	2N3611		GPA	12	C	35	S		30	500 m		0.12	B				.6		500	m	
2N326			GNA	7.0	C	35	S		30	500 m		0.12	B				.6		500	m	
D 2N327	2N2906		SPA	0.35	A	50	B	0.05													
2N327A	2N2906		**SPA**	.385	A	40	O	0.1	9	3.0 m							.3		5.0	m	
2N327B	2N2906		**SPA**	.385	A	40	O		9	3.0 m							.3		5.0	m	
D 2N328			SPA	0.35	A	35	B	0.05													
2N328A			**SPA**	.385	A	35	O	0.1	18	3.0 m							.5		10	m	
2N328B			**SPA**	.385	A	35	O		18	3.0 m							.5		10	m	
D 2N329			SPA	0.35	A	30	B	0.05													
2N329A			**SPA**	.385	A	30	O	0.1	36	3.0 m							.6		15	m	
2N329B			**SPA**	.385	A	30	O		36	3.0 m							.6		15	m	
D 2N330			SPA	0.35	A	45	B	0.05													
2N330A	2N2906		**SPA**	.385	A	30	O	0.1													
★ 2N331		1	GPE	0.2	A	40	O	0.01	20	1.5 m				50				20	1000	H	5/31
2N332	2N2221		SNA	0.15	A	45	B		9												5/
2N332A	2N2218		SNE	0.5	A	45	O	.025				2.0	B	15			11	30	5000	H	5/
2N333	2N2221		SNA	0.15	A	45	B		18												
2N333A	2N2218		SNE	0.5	A	45	O	.025				2.0	B	15			11	30	5000	H	5/
2N334	2N2221		SNA	0.15	A	45	B		18												5/
2N334A	2N2218		SNE	0.5	A	45	O	.025				6.4	B	15			12	30			5/
2N334B	2N2218		SNE	0.5	A	60	O	.025	15	1.0 m		6.4	B	15			12	30	5000	H	5/
2N335	2N2221		SNA	0.15	A	45	B		36												
2N335A	2N2218		SNE	0.5	A	45	O	.025				2.0	B	15			12	30			5/
2N335B	2N2218		SNA	0.5	A	60	O	.025	28	1.0 m		2.0	B	15							5/
2N336	2N2221		SNA	0.15	A	45	B		76												
2N336A	2N2218		SNE	0.5	A	45	O	.025				2.0	B	15			12	30			5/
2N337	2N2221		SNA	.125	C	45	B		20	10 m		8.0	B								
2N337A	2N2218		SNA	0.5	A	45	B	0.02	20	10 m		12	B								5/
2N338	2N2221		SNA	.125	C	45	B		45	10 m		16	B								
2N338A	2N2218		SNA	0.5	A	45	B	0.02	45	10 m		20	B								5/
2N339			SNA	1.0	C	55	O														
2N339A			SNA	3.0	A	60	O	0.15	20			10	T	50							11/
2N340			SNA	1.0	C	85	O														
2N340A			SNA	3.0	A	85	O	0.15	20			10	T	50							11/
2N341			SNA	1.0	C	85	O														
2N341A			SNA	3.0	A	125	O	0.15	20			10	T	50							11/
2N342			SNA	1.0	C	60	O	0.06	9	5 m											11/
2N342A			SNA	1.0	C	85	O	0.06	9	5 m											11/

	TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C/I_B @ I_C	Unit	PACKAGE To-Case No. No.
	2N342B			SNA	1.0	C	85	O	0.06		m									11/
	2N343			SNA	1.0	C	60	O	0.06	28	5 m									11/
	2N343A			SNA	1.0	C	60	O	0.06	28	5 m									11/
	2N343B			SNA	1.0	C	65	O	0.06											11/
	2N344			GPA	0.02	A	5	V	.005			30	M							
	2N345			GPA	0.02	A	5	V	.005			30	M							
	2N346			GPA	0.02	A	5	V	.005			60	M							
	2N350			GPA	10	C	30	S	3.0	20	700 m	0.1	E							
	2N350A		1	GPA	90	C	40	S		20	0.7 A	0.1	E				30		1000 H	3/
	2N351			GPA	10	C	30	S	3.0	25	700 m	0.129	E							
	2N351A		1	GPA	90	C	40	S		25	0.7 A	0.125	E				32		1000 H	3/
D	2N352	2N3615		GPA	25	C	40	R	2.0	30	1.0 A	0.3	E							
D	2N353	2N3615		GPA	30	C	40	R	2.0	40	1.0 A	0.28	E							
D	2N354	2N2906		SPA	0.15	A	25	U	0.05			8.0	M							
	2N355	2N2906		SPA	0.15	A	10	U	0.05			8.0	M				.15		5.0 m	
	2N356			GNA	0.1	A	18	O	0.5	20	100 m						.2		100 m	
	2N356A			GNG	0.15	A	20	O		20	100 m					2.1K/1.7K	.2		100 m	5/
	2N357			GNA	0.1	A	15	O	0.5	20	200 m						.2		200 m	
	2N357A			GNG	0.15	A	20	O		25	200 m					0.8K/.14K	.2		200 m	5/
	2N358			GNA	0.1	A	12	O		20	300 m						.2		300 m	
	2N358A			GNG	0.15	A	15	O		25	300 m					0.8K/.14K	.2		300 m	5/
	2N359			GPA	0.17	A	18	R	0.4	100	50 m									5/
	2N360	2N1192		GPA	0.17	A	30	R	0.4	50	50 m									5/
	2N361	2N1191		GPA	0.17	A	30	R	0.4	25	50 m									5/
	2N362	2N1192		GPA	0.17	A	18	O	0.2											5/
	2N363	2N1192		GPA	0.17	A	28	O	0.2											5/
	2N364			GNA	0.15	A	30	B				0.8	B							
	2N365			GNA	0.15	A	30	B				0.8	B							
	2N366			GNA	0.15	A	30	B				0.8	B							
	2N367	2N1191		GPA	0.1	A	30	B				0.24	B							
	2N368	2N1191		GPA	0.1	A	30	B				0.32	B							
	2N369	2N1191		GPA	0.1	A	30	B				0.4	B							
	2N370	2N3324		GPA	0.08	A	24	B												
D	2N371	2N3324		GPA	0.08	A	24	B												
	2N372	2N3324		GPA	0.08	A	24	B												
	2N373			GPA	0.08	A	25	B												
D	2N374	2N3325		GPA	0.08	A	25	B												
★	2N375		1	GPA	58	C	60	S	3.0	35	1.0 A	0.245	E				1.0		2.0 A	
★	2N376			GPA	10	A	40	O	3.0	35	700 m									3/11
★	2N376A		1	GPA	90	C	40	S		35	0.7 A	0.175	E				34		1000 H	3/11
	2N377			GNA	0.15	A	20	V	0.2	20	30 m	4.0	B				.5		200 m	5/
	2N377A			GNA	0.15	A	40	V		20	30 m									
★	2N378		1	GPA	50	C	20	B	5.0	40	2.0 A	0.2	E				1.0		2.0 A	3/
★	2N379		1	GPA	50	C	40	B	5.0	20	2.0 A	0.1	E				1.0		2.0 A	3/
★	2N380		1	GPA	50	C	30	B	5.0	30	2.0 A	0.150	E				1.0		2.0 A	3/
★	2N381		1	GPA	0.2	A	25	R	0.4	35	20 m									5/31
★	2N382		1	GPA	0.2	A	25	R	0.4	60	20 m									5/31
★	2N383		1	GPA	0.2	A	25	R	0.4	75	20 m									5/31
	2N384	2N3325		GPA	0.12	A	40	O		20	1.5 m									
	2N385			GNA	0.15	A	25	R	0.2	30	30 m	3.2	B							
	2N385A			GNA	0.15	A	40	V	0.2	30	30 m	3.2	B	20						
D	2N386			GPA	0.5	C	60	V	3.0	20	2.5 A	0.14	E							
D	2N387			GPA	0.5	C	80	V	3.0	20	2.5 A	0.12	E							
	2N388			GNA	0.15	A	20	R	0.2	60	30 m	4.0	B							5/
	2N388A			GNA	0.15	A	40	V		60	.30 m	4.0	B							
	2N389	2N5068		SNA	85	C	60	R	3.0	12	1.0 A									
	2N389A	2N5068		SNA	85	C	60	R		12	1.0 A	1.0	T							
	2N392	2N3614		GPA	48	C	40	R	5.0	60	3.0 A						.5		3.0 A	
	2N393	2N967		GPA	.025	A	6	S	.05	20	50 m	25	T				.07		8.0 m	
	2N394			GPA	0.15	A	10	O	0.2	20	10 m	3.2	B							
	2N394A			GPA	0.15	A	30	O	0.2	30	10 m	3.2	B	20						5/
	2N395			GPA	0.2	A	15	R	0.2	20	10 m	2.4	B				.2		50 m	
	2N396			GPA	0.2	A	20	R	0.2	30	10 m	4.0	B				.2		50 m	
	2N396A			GPA	0.2	A	20	O	0.2	30	10 m	4.0	B	20			.2		50 m	5/
	2N397			GPA	0.2	A	15	R	0.2	40	10 m	8.0	B				.2		50 m	
	2N398		1	GPA	0.05	A	105	S	0.2	20	5.0 m									5/31
	2N398A		1	GPA	0.15	A	105	S	0.2	20	5.0 m									5/31
	2N398B	2N2043		GPA	0.25	A	105	S	0.2	20	5.0 m	0.8	B							5/31
	2N399	2N1536		GPA	25	C	35	R									1.0		1.2 A	
	2N400	2N1536		GPA	35	C	20	O	3.0	40	0.5 A	0.12	E				.8		1.0 A	3/

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max @ I_C/I_B	& I_C	Unit	PACKAGE To-Case No. No.
2N401	2N3611		GPA	25 C		35 R											1.0		1.2 A		
2N402	2N1191		GPA	0.18 A		20 O															
2N403	2N1191		GPA	0.18 A		20 O		0.2													
2N404			GPA	0.15 A		25 B		0.01													92/
2N404A			GPA	0.15 A		35 O			30	12 m		3.2 B		20							92/
2N405	2N322		GPA	0.15 A		71 B		.035													
2N406	2N322		GPA	0.15 A		71 B		.035													
2N407	2N324		GPA	0.15 A		71 B		0.07													
2N408	2N324		GPA	0.15 A		71 B		0.07													
2N409			GPA	0.08 A		71 B		.015													
2N410			GPA	0.08 A		71 B															
2N411			GPA	0.08 A		71 B		.015													
2N412			GPA	0.08 A		71 B															
2N413			GPA	0.15 A		18 O		0.2													
2N413A			GPA	0.15 A		15 O															
2N414			GPA	0.15 A		15 O		0.2													
2N414A			GPA	0.15 A		15 O															
2N414B			GPA	0.2 A		24 V		0.4				3.2 B		14							5/31
2N414C			GPA	0.2 A		24 V						3.2 B									
2N415			GPA	0.15 A		10 O		0.2													
2N415A			GPA	0.15 A		10 O															
2N416			GPA	0.15 A		12 O		0.2													
2N417			GPA	0.15 A		10 O		0.2													
2N418	2N3616		GPA	25 C		75 R			40	4.0 A							2.0		4.0 A		
2N419			GPA	35 C		20 O		3.0	50	0.5 A		0.15 E					.8		1.5 A		
2N420	2N3612		GPA	25 C		40 R			40	4.0 A							2.0		4.0 A		3/
2N420A	2N3616		GPA	25 C		65 R			40	4.0 A							2.0		4.0 A		
2N422	2N651		GPA	0.15 A		20 O		0.2													
2N422A	2N5069		GPE	.175 A		20 O		0.2										6.0	10 K		5/
2N424	2N5069		SNA	85 C		80 R			12	1.0 A											
2N424A			SNA	85 C		80 R		3.0	12	1.0 A		1.0 T									
2N425			GPA	.175 A		20 O		0.4	20			2.0 B					.32		100 m		
2N426			GPA	.175 A		10 O		0.4	30			2.4 B					.32		100 m		
2N427			GPA	.175 A		15 O		0.4	40			4.0 B					.32		150 m		
2N428			GPA	.175 A		12 O		0.4	60			8.0 B					.32		200 m		
2N428A			GPS	0.15 A		18 O			80			8.0 B		20	0.85/1.10		.32		.2 A		5/
2N438			GNA	0.1 A		25 O			20	50 m		2.0 B									9/
2N438A			GNA	0.15 A		25 O			20	50 m		2.0 B									9/
2N439			GNA	0.1 A		20 O			30	50 m		4.0 B									9/
2N439A			GNA	0.15 A		20 O			30	50 m		4.0 B									9/
2N440			GNA	0.1 A		15 O			40	50 m		8.0 B									5/
2N440A			GNA	0.15 A		15 O			40	50 m		8.0 B									
★ 2N441		1	GPA	70 C		40 S		15	20	5.0 A											
★ 2N442		1	GPA	70 C		45 S		15	20	5.0 A											36/5
★ 2N443		1	GPA	70 C		50 S		15	20	5.0 A							1.0		12 A		36/5
2N444			GNA	0.1 A		15 O						0.4 B									36/5
2N444A			GNA	0.15 A		25 O			20	20 m		0.4 B									5/
2N445			GNA	0.1 A		12 O						0.4 B									
2N445A			GNA	0.15 A		18 O			40	20 m		1.6 B									5/
2N446			GNA	0.1 A		10 O						4.0 B									
2N446A			GNA	0.15 A		15 O			60	20 m		4.0 B									5/
2N447			GNA	0.1 A		6 O						4.0 B									
2N447A			GNA	0.15 A		12 O			80	20 m		7.2 B									5/
2N447B			GNA	0.15 A		12 O			80	20 m		7.2 B									5/
2N448			GNA	.065 A		15 O			8.0	1.0 m											
2N449			GNA	.065 A		15 O			34	1.0 m											
2N450			GPA	0.15 A		12 O			30	10 m		4.0 B					.2		10 m		
2N456	2N456A		GPA	50 C		40 X											1.0		5.0 A		
2N456B			GPA	50 C		30 O		7.0	30	5.0 A		0.2 T					.5		5.0 A		3/
2N457			GPA	50 C		60 X											1.0		5.0 A		3/
★ 2N457A		1	GPA	50 C		30 O		7.0	30	5.0 A		0.2 T					.5		5.0 A		3/
2N457B			GPA	50 C		40 O		7.0	30	5.0 A		0.2 T					.5		5.0 A		3/
2N458			GPA	50 C		80 X		5.0									1.0		5.0 A		
★ 2N458A		1	GPA	50 C		40 O		7.0	30	5.0 A		0.2 T					.5		5.0 A		3/
2N458B			GPA	50 C		45 O		7.0	30	5.0 A		0.2 T					.5		5.0 A		3/
★ 2N459		1	GPA	50 C		60 B		5.0	20	2.0 A		0.1 E					1.0		2.0 A		3/
★ 2N459A		1	GPA	106 C		60 O		5.0	40	2.0 A		0.2 E					.3		2.0 A		3/
2N460		1	GPA	0.2 A		35 R		0.4	16					2.0							5/31
★ 2N461		1	GPA	0.2 A		35 R		0.4	32					20							5/31
D 2N462			GPA	0.15 A		40 B		0.2	20	200 m		0.4 B									

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C @ I_B	& I_C	Unit	PACKAGE To-Case No. No.
D 2N463	2N1551		GPA	37.5 C		60	B		20	2.0 A	0.08	E								
★ 2N464		1	GPE	0.15 A		40	R	0.2									22	1000	H	5/31
★ 2N465		1	GPE	0.15 A		30	R	0.2									22	1000	H	5/31
★ 2N466		1	GPE	0.15 A		20	R	.2									22	1000	H	5/31
★ 2N467		1	GPE	0.15 A		15	R	0.2									22	1000	H	5/31
2N469	THRU		OPT	Table 10																
2N469A			OPT	Table 10																
2N470	2N2221		SNA	0.2 A		15	O	.025			8.0	T	10			*1.5*		*5.0*	*m*	5/
2N471	2N2221		SNA	0.2 A		30	O	.025			8.0	T	10			*1.5*		*5.0*	*m*	5/
2N471A	2N2221		SNE	0.2 A		30	O	.025			8.0	T	8.0				30	1000	H	5/
2N472	2N2221		SNA	0.2 A		45	O	.025			8.0	T	10			*1.5*		*5.0*	*m*	5/
2N472A	2N2221		SNE	0.2 A		45	O	.025			8.0	T	8.0				30	1000	H	5/
2N473	2N2221		SNA	0.2 A		15	O	.025			8.0	T	8.0			*1.5*		*5.0*	*m*	5/
2N474	2N2221		SNA	0.2 A		30	O	.025			8.0	T	8.0			*1.5*		*5.0*	*m*	5/
2N474A	2N2221		SNE	0.2 A		30	O	.025	10		8.0	T	8.0				30	1000	H	5/
2N475	2N2221		SNA	0.2 A		45	O	.025			8.0	T	8.0			*1.5*		*5.0*	*m*	5/
2N475A	2N2221		SNE	0.2 A		45	O	.025	10		8.0	T	8.0				30	1000	H	5/
2N476	2N2221		SNA	0.2 A		15	O	.025			12	T	10			*1.5*		*5.0*	*m*	5/
2N477	2N2221		SNA	0.2 A		30	O	.025			12	T	10			*1.5*		*5.0*	*m*	5/
2N478	2N2221		SNA	0.2 A		15	O	.025			20	T				*1.5*		*5.0*	*m*	5/
2N479	2N2221		SNA	0.2 A		30	O	.025			20	T				*1.5*		*5.0*	*m*	5/
2N479A	2N2221		SNE	0.2 A		30	O	.025	10		20	T	8.0				30	1000	H	5/
2N480	2N2221		SNA	0.2 A		45	O	0.5	20	100 u	20	T		*0.8/10*		**1.5**	**8.0**	1000	H	5/
2N480A	2N2221		SNE	0.2 A		45	O	0.5	35	100 u	20	T	8.0	*0.8/5*			30	1000	H	5/
2N481			GPA	0.15 A		12	O													
2N482			GPA	0.15 A		12	O													
2N483			GPA	0.15 A		12	O													
2N484			GPA	0.15 A		12	O													
2N485			GPA	0.15 A		12	O													
2N486			GPA	0.15 A		12	O													
2N487			GPA	0.1 A		18	R	.025	20	1.0 m	10	T	14							5/
2N489	THRU		UJT	Table 8																
2N494C			UJT	Table 8																
2N495			SPA	0.15 A		25	U	0.05			8.0	T								
2N496			SPA	0.15 A		10	U	0.05	15	15 m	7.2	T				*.15*		*5.0*	*m*	
2N497	2N4238		SNA	4.0 C		60	O		12	200 m										
2N497A	2N4238		SNA	5.0 C		60	O	0.5	12	200 m										5/31
2N498	2N5681		SNA	4.0 C		100	O		12	200 m										
2N498A	2N5681		SNA	5.0 C		100	O	0.5	12	200 m										5/31
★ 2N499		1	GPA	0.03 A		18	O	0.05			120	T	2.5							1/149
★ 2N499A		1	GPA	0.06 A		18	O	0.05			120	T	2.5							1/149
2N500	2N3323		GPA	0.05 A		15														30/
2N501			GPA	0.06 A		12	S		20	10 m	90	T				*.2*		*10*	*m*	
2N501A			GPA	0.06 A		12	S	0.05	30	10 m	90	T								30/
★ 2N502			GPA	0.06 A		20	S	0.05			220	T	2.0							9/
★ 2N502A		1	GPE	.075 A		30	S	0.05			220	T	1.6				7.0			5/31
★ 2N502B		1	GPF	.075 A		30	S	0.05					1.6			**10**	**7.0**	**200**	**M**	9/
2N503	2N3284		GPA	.025 A		20	S	0.05			168	T				**11**				9/
2N504	2N3323		GPA	0.03 A		25	S	0.05	20	10 m	50	M								1/
2N506			GPA	0.05 A		40	B	0.1	25	50 m	0.48	B				*2.0*		*3.0*	*A*	
2N507			GNA	0.05 A		40	B	0.1	25	50 m	0.48	B				*2.0*		*3.0*	*A*	
★ 2N508		1	GPA	0.2 A		18	R	0.5	99	20 m	2.0	B	35							5/31
★ 2N508A		1	GPE	0.2 A		30	S	0.2	100	20 m	2.0	B	35				5.0	1000	H	5/31
D 2N509			GPA	.225 A		30	B				400	T								
2N511	2N1164		GPA	150 C		30	O	25	20	10 A	0.26	T				*.5*		*10*	*A*	
2N511A	2N1164		GPA	150 C		40	O	25	20	10 A	0.26	T				*.5*		*10*	*A*	
2N511B	2N1166		GPA	150 C		45	O	25	20	10 A	0.26	T				*.5*		*10*	*A*	
2N512	2N1164		GPA	150 C		30	O	25	20	15 A	0.28	T				*.75*		*15*	*A*	
2N512A	2N1164		GPA	150 C		40	O	25	20	15 A	0.28	T				*.75*		*15*	*A*	
2N512B	2N1166		GPA	150 C		45	O	25	20	15 A	0.28	T				*.5*		*10*	*A*	
2N513	2N1163		GPA	150 C		30	O	25	20	20 A	0.3	T				*1.2*		*20*	*A*	
2N513A	2N1165		GPA	150 C		40	O	25	20	20 A	0.3	T				*1.2*		*20*	*A*	
2N513B	2N1167		GPA	150 C		45	O	25	20	20 A	0.3	T				*.5*		*10*	*A*	
2N514	2N1163		GPA	80 C		30	O	25	20	25 A	0.43	T				*1.2*		*25*	*A*	
2N514A	2N1165		GPA	80 C		40	O	25	20	25 A	0.43	T				*1.2*		*25*	*A*	
2N514B	2N1167		GPA	80 C		45	O	25	20	25 A	0.43	T				*1.2*		*25*	*A*	
2N515			GNA	0.05 A		18	R	0.01			1.6	B								
2N516			GNA	0.05 A		18	R	0.01			1.6	B								
2N517			GNA	0.05 A		18	R	0.01			1.6	B								
2N518			GPA	0.15 A		12	O	.125	60	10 m	8.0	B	16			*.15*		*10*	*m*	

	TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C @ I_B	I_C & I_C	Unit	PACKAGE To-Case No.
	2N519			GPA	0.1	A	15	O					0.4	B								
	2N519A			GPA	0.15	A	18	O		20	20	m	0.4	B								5/31
	2N520			GPA	0.1	A	12	O					2.4	B								
	2N520A			GPA	0.15	A	15	O		40	20	m	1.6	B								5/31
	2N521			GPA	0.1	A	10	O					6.4	B								
	2N521A			GPA	0.15	A	12	O		60	20	m	6.4	B								5/31
	2N522			GPA	0.1	A	8.0	O					12	B								
	2N522A			GPA	0.15	A	10	O		80	20	m	12	B								5/31
	2N523			GPA	0.1	A	6.0	O					16.8	B								
	2N523A			GPA	0.15	A	6.0	O		100	20	m	16.8	B								5/
★	2N524		1	GPE	.225	A	30	R	0.5	25	20	m	4.0	B	40				15	1000	H	5/31
	2N524A			GPE	.225	A	30	R	0.5	25	20	m	4.0	B	40				15	1000	H	5/
★	2N525		1	GPE	.225	A	30	R	0.5	34	20	m	4.4	B	40				15	1000	H	5/31
	2N525A			GPE	.225	A	30	R	0.5	34	20	m	4.4	B	40				15	1000	H	5/
★	2N526		1	GPE	.225	A	30	R	0.5	53	20	m	5.2	B	40				15	1000	H	5/31
	2N526A			GPE	.225	A	30	R	0.5	53	20	m	5.2	B	40				15	1000	H	5/
★	2N527		1	GPE	.225	A	30	R	0.5	72	20	m	5.6	B	40				15	1000	H	5/31
	2N527A			GPA	.225	A	30	R	0.5	72	20	m	5.6	B	40					1000	H	5/
D	2N528			GPA	2.5	C	40		1.0	20	0.5	A										
	2N529			GPA	0.1	A	15	O														
	2N530			GPA	0.1	A	15	O														
	2N531			GPA	0.1	A	15	O														
	2N532			GPA	0.1	A	15	O														
	2N533			GPA	0.1	A	15	O														
D	2N534	2N1189		GPA	.025	A	50	U	.025													
	2N535	2N1192		GPA	0.05	A	20	U	0.02									10				
	2N535A	2N1192		GPA	0.05	A	20	U	0.02									5.0				
	2N535B			GPA	0.05	A	20	U	0.02													
	2N536	2N1193		GPA	0.05	A	20	U	0.03	100	30	m	0.8	B				.13		10	m	
D	2N537			GPA			30	B														
	2N538	2N2140		GPA			34	C		60								.6		2.0	A	
	2N538A	2N2140		GPA			34	C		60								.6		2.0	A	
	2N539	2N3616		GPA			34	C		55								.6		2.0	A	
	2N539A	2N3616		GPA			11	C		55								.6		2.0	A	
	2N540	2N1551		GPA			34	C		55								.6		2.0	A	
	2N540A	2N1551		GPA			34	C		55								.6		2.0	A	
	2N541			SNA	0.2	A	15	U	.025				10	T	20			1.5		5.0	m	5/
D	2N541A			SNA	0.2	A	15	O	.025	20			8.0	T	20							5/
	2N542			SNA	0.2	A	30	U	.025				10	T	20			1.5		5.0	m	5/
	2N542A			SNE	0.2	A	30	O	.025	20			10	T	8.0				30	1000	H	5/
	2N543			SNA	0.2	A	50	U	.025				10	T	20			1.5		5.0	m	5/
	2N543A			SNE	0.2	A	45	O	.025	20			10	T	8.0				30	1000	H	5/
D	2N544			GPA	0.08	A	34	B	0.1													
	2N545	2N4238		SNA	5	C	30	O	0.8	15	0.5	A			100			5.0		.5	A	5/
	2N546	2N4237		SNA	5	C	30	O	0.8	15	0.5	A			100							5/
	2N547	2N4238		SNA	5	C	60	O	0.8	20	0.5	A	4.0	T	100							5/
	2N548	2N4237		SNA	5	C	30	O	0.8	20	0.5	A	4.0	T	100			3.0		.5	A	5/
	2N549	2N4238		SNA	5	C	60	O	0.8	20	0.2	A	4.0	T	100			4.0		.2	A	5/
	2N550	2N4237		SNA	5	C	30	O	0.8	20	0.2	A	4.0	T	100			4.0		.2	A	5/
	2N551			SNA	5	C	60	O	0.2	20	50	m	3.0	T	100			2.0		50	m	5/
	2N552			SNA	5	C	30	O	0.2	20	50	m	3.0	T	100			2.0		50	m	5/
	2N553			GPA	35	C	80	B	4.0	40	500	m						.9		3.0	A	
★	2N554		1	GPA	40	C			3.0									20		1000	H	3/
★	2N555		1	GPA	10	C	40	B	3.0									25		1000	H	3/
	2N556			GNA	0.1	A	20	X	0.2	35	1.0	m						.5		200	m	
	2N557			GNA	0.1	A	20	X	0.2	20	1.0	m						.5		200	m	
	2N558			GNA	0.1	A	15	X	0.2	60	1.0	m						.75		200	m	
D	2N559			GPA	0.15	A	15	S										.3		10	m	
	2N560			SNA	0.5	A	60	S	0.1	20	100	m						.5		10	m	
	2N561			GPA	50	A	50	O	5.0	20	4.0	A										
	2N563	2N650		GPA	0.15	A	25	O		10												
	2N564	2N650		GPA	0.12	A	25	O		10												
	2N565	2N651		GPA	0.15	A	25	O		30												
	2N566	2N651		GPA	0.12	A	25	O		30												
	2N567	2N651		GPA	0.15	A	25	O		50												
	2N568	2N651		GPA	0.12	A	25	O		50												
	2N569	2N1193		GPA	0.15	A	20	O		70												
	2N570	2N1192		GPA	0.12	A	20	O		70												
	2N571	2N1193		GPA	0.15	A	10	O		100												
	2N572	2N1193		GPA	0.12	A	10	O		100												

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF dB Max @ I_C/I_B	f & I_C	Unit	PACKAGE To-Case No.
2N573			GPA	0.2	A	25	O	0.25	30	50 m											5/
2N574	2N3316		GPA	180	C	55	O	10	9.0	10 A							.2		10 A		
2N574A	2N1551		GPA	180	C	60	O	10	9.0	10 A							.2		10 A		
2N575	2N2153		GPA	180	C	50	O	25	19	10 A							.5		25 A		
2N575A	2N2154		GPA	180	C	55	O	25	19	10 A							.5		25 A		
2N576			GNA	0.2	A	20	R	0.4	20	400 m		1.6	B				.4		400 m		
2N576A			GNA	0.2	A	20	R		20	400 m		4.0	B				.4		400 m		
D 2N577			GPA	.025	A	25	B														
2N578			GPG	0.12	A	20	B	0.4	10	400 m		2.4	B			900/600	.3		400 m		
2N579			GPG	0.12	A	20	B	0.4	20	400 m		4.0	B			400/500	.3		400 m		
2N580			GPG	0.12	A	20	B	0.4	30	400 m		8.0	B			200/400	.3		400 m		
2N581			GPA	0.08	A	18	B	0.1	20	20 m		3.2	B								
2N582			GPA	0.12	A	25	B	0.1	40	20 m		11.2	B				.3		100 m		
2N583			GPA	0.08	A	18	B	0.1	20	20 m		3.2	B								
2N584			GPA	0.12	A	25	B	0.1	40	20 m		11.2	B				.3		100 m		
2N585			GPA	0.12	A	25	B	0.2	20	20 m		2.4	B				.2		20 m		
2N586	2N1191		GPA	0.25	A	45	B		35	250 m							.5		250 m		
2N587			GNA	0.15	A	20	R	0.2	20	200 m							.5		200 m		
2N588	2N3324		GPA	0.03	A	15	S	0.05				200	M								30/
D 2N588A			GPF	0.06	A	15	S	0.05	30	10 m		200	M					15	10 M		1/
2N589	2N1532		GPA	90	C	75	S		20	3.0 A		0.1	E				1.5		3.0 A		
2N591	2N1192		GPA	0.05	A	32	O														
2N592			GPA	.125	A	20	O		20												
2N593			GPA	.125	A	30	O		30												
2N594			GNA	0.1	A	20	O		20			30	E								
2N595			GNA	0.1	A	15	O		35			105	E								
2N596			GNA	0.1	A	10	O		50			250	E								
2N597	2N3427		GPA	0.25	A	40	S	0.5	40	100 m		2.4	B	20			.2		10 m		5/
2N598	2N3427		GPA	0.25	A	35	S	0.5	70	100 m		5.6	T	20			.2		10 m		5/
2N599	2N3428		GPA	0.25	A	20	S	0.4	100	100 m		10	T				.2		10 m		9/
2N600	2N3427		GPA	0.75	C	35	S	0.4	70	100 m		5.6	T				.2		10 m		
2N601	2N3428		GPA	0.75	C	20	S	0.4	100	100 m		10	T				.2		10 m		31/
2N602			GPA	0.12	A	20	O		20			10	T				.25		10 m		
2N603			GPA	0.12	A	20	O		30			30	T				.25		15 m		
2N604			GPA	0.12	A	20	O		40			50	T				.25		20 m		
D 2N605			GPA	0.12	A	15	O														
D 2N606			GPA	0912	A	15	O														
D 2N607			GPA	0.12	A	15	O														
D 2N608			GPA	0.12	A	15	O														
2N609	2N1193		GPA	0.18	A	15	O	0.2													
2N610	2N1193		GPA	0.18	A	15	O	0.2													
2N611	2N1192		GPA	0.18	A	15	O	0.2													
2N612	2N1191		GPA	0.18	A	15	O	0.15													
2N613	2N1191		GPA	0.18	A	15	O	0.2													
2N614			GPA	0.18	A	15	O	0.15													9/
2N615			GPA	0.18	A	15	O	0.15													9/
2N616			GPA	0.18	A	12	O	0.15													9/
2N617			GPA	0.18	A	12	O	0.15													9/
★ 2N618		1	GPA	90	C	60	S	3.0	60	1.0 A		0.3	E				.8		2.0 A		3/
2N619			SNA	.175	A	40	O	0.05	9.0	5.0 m		0.16	B	22			.5		8.0 m		5/
2N620			SNA	.175	A	35	O	0.05	18	5.0 m		0.2	B	22			.4		8.0 m		5/
2N621			SNA	.175	A	30	O	0.05	36	5.0 m		0.24	B	22			.3		8.0 m		5/
2N622			**SNA**	.385	A	30	O	0.05				0.24	B	70				15			
D 2N624			GPA	0.1	A	20	S					20	E								
D 2N625			GNA	1.5	C	30	S		20	500 m							1.0		500 m		
D 2N626			GPA																		
2N627			GPA	90	C	30	S	10	10	10 A		0.05	E				1.0		10 A		41/
2N628			GPA	90	C	45	S	10	10	10 A		0.05	E				1.0		10 A		41/
2N629			GPA	90	C	60	S	10	10	10 A		0.05	E				1.0		10 A		41/
2N630			GPA	90	C	75	S	10	10	10 A		0.05	E				1.0		10 A		41/
2N631	2N1194		GPA	.167	A	20	R	0.1													
2N632	2N1193		GPA	.167	A	20	R	0.1													
2N633	2N1192		GPA	.167	A	30	R	0.1													
2N634			GNA	0.15	A	15	O	0.3	15	200 m		6.4	B								9/
2N634A			GNA	0.15	A	20	R	0.3	40	10 m		6.4	B	20							5/
2N635			GNA	0.15	A	15	O	0.3	25	200 m		9.6	B				.2		10 m		9/
2N635A			GNA	0.15	A	20	R	0.3	80	10 m		10	B	20			.2		10 m		5/
2N636			GNA	0.15	A	15	O	0.3	35	200 m		14	B								
2N636A			GNA	0.15	A	15	R	0.3	100	10 m		14	B	20							5/
2N637			GPA	60	C	35	R	5.0	30	3.0 A							1.5		3.0 A		

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / @ I_C/I_B & I_C	Unit	PACKAGE To-Case No. No.
2N637A			GPA	60	C	65	R	5.0	30	3.0	A						1.5		3.0	A	
2N637B			GPA	60	C	75	R	5.0	30	3.0	A						1.5		3.0	A	
2N638			GPA	60	C	35	R		20	3.0	A						2.0		3.0	A	
2N638A			GPA	60	C	65	R		20	3.0	A						2.0		3.0	A	
2N638B			GPA	60	C	75	R		20	3.0	A						2.0		3.0	A	
2N639			GPA	37	C	35	R		15	3.0	A						2.5		3.0	A	
2N639A			GPA	37	C	65	R		15	3.0	A						2.5		3.0	A	
2N639B			GPA	37	C	75	R		15	3.0	A						2.5		3.0	A	
D 2N640			GPA	0.08	A	34	B	0.01													7/
D 2N641			GPA	0.08	A	34	B	0.01													7/
D 2N642			GPA	0.08	A	34	B	0.01													7/
D 2N643	2N2955		GPA	0.12	A	30	B	0.1	20	10	m	20	T	5.0							9/
D 2N644	2N2955		GPA	0.12	A	30	B	0.1	20	10	m	20	T	5.0							9/
D 2N645	2N2955		GPA	0.12	A	30	B	0.1	20	10	m	20	T	5.0							9/
D 2N646			GNA	0.1	A	25	O	0.05	50	30	m										40/
2N647			GNA	0.1	A	25	O	0.05									54				1/
2N649			GNA	0.1	A	18	O	0.05									54				1/
★ 2N650		1	GPE	0.2	A	30	R	0.5	30	10	m	0.6	B	25			54	15	1000	H	5/31
★ 2N650A		1	GPE	0.2	A	30	R	0.5	33	10	m	0.6	B	25				15	1000	H	5/31
★ 2N651		1	GPE	0.2	A	30	R	0.5	45	10	m	0.8	B	25				15	1000	H	5/31
★ 2N651A		1	GPE	0.2	A	30	R	0.5	45	10	m	0.8	B	25				15	1000	H	5/31
★ 2N652			GPE	0.2	A	30	R	0.5	80	10	m	1.0	B	25				15	1000	H	5/31
★ 2N652A		1	GPE	0.2	A	30	R	0.5	80	10	m	1.0	B	25				15	1000	H	5/31
★ 2N653		1	GPA	0.2	A	25	R	0.25	20	10	m										5/31
★ 2N654		1	GPA	0.2	A	25	R	0.25	40	10	m										5/31
★ 2N655		1	GPA	0.2	A	25	R	0.25	70	10	m										5/31
★ 2N656	2N4238		SNA	4.0	C	60	O		30	200	m										5/31
2N656A	2N4238		SNA	5.0	C	60	O	0.5	30	200	m										5/
★ 2N657	2N5681		SNA	4.0	C	100	O		30	200	m										5/31
2N657A	2N5681		SNA	5.0	C	100	O	0.5	30	200	m										5/
2N658			GPA	.167	A	16	O		25			2.0	B				3.4		150	m	
2N659			GPA	.167	A	14	O	1.0	40			4.0	B	20			3.5		250	m	
2N660			GPA	.167	A	11	O	1.0	60			8.0	B				3.5		400	m	
2N661			GPA	.167	A	9.0	O	1.0	80			12.0	B	20			3.5		550	m	
2N662			GPA	.167	A	11	O	1.0	30			3.2	B	20			3.4		180	m	
2N663			GPA	35	C	25	O	4.0	25	500	m	0.375	E				1.0		3.0	A	
★ 2N665			GPA	35	C	40	O	3.0	40	500	m	0.4	E				.9		3.0	A	3/
★ 2N669		1	GPA	62.5	C	30	S	3.0	75	0.5	A	0.375	E								3/
2N670	2N3428		GPA	0.3	A	40	V	2.0	40	1.0	A	0.4	B				.35		1.0	A	
2N671	2N3428		GPA	0.8	C	40	V	2.0	40	1.0	A	0.4	B				.35		1.0	A	
2N672	2N3428		GPA	0.3	A	25	S	2.0									.2		400	m	
2N673	2N3428		GPA	0.8	C	25	S	2.0									.2		400	m	
2N674	2N3428		GPA	0.3	A	75	V	2.0	40	1.0	A	0.32	B				.35		1.0	A	
2N675	2N3428		GPA	0.8	C	75	V	2.0	40	1.0	A	0.32	B				.35		1.0	A	26/
2N677			GPA		C	90	S	15	20	10	A						1.0		10	A	3/
2N677A			GPA	90	C	40	S	15	20	10	A						1.0		10	A	3/
2N677B			GPA	90	C	70	S	15	20	10	A						1.0		10	A	3/
2N677C			GPA	90	C	80	S	15	20	10	A						1.0		10	A	3/
2N678			GPA	90	C	20	O	15	50	10	A						1.0		10	A	41/
2N678			GNA	0.15	A	20	X		20	30	m	1.6	B								
2N678A			GPA	90	C	30	O	15	50	10	A										41/
2N678B			GPA	90	C	60	O	15	50	10	A										41/
2N678C			GPA	90	C	70	O	15	50	10	A										41/
2N680	2N1191		GPA	0.15	A	20	S	0.15	18	50	m						.75		50	m	
D 2N681	THRU		THY	Table	6																
D 2N692AS			THY	Table	6																
D 2N694			GPF	0.1	A	15	O	0.05	10	2.0	m	340	T	2.5			18	12	70	M	
D 2N695	2N705		GPG	.075	A	15	S	0.05	25	10	m					75/200	1.0		50	m	
★ 2N696			SNA	0.6	A	40	R		20	150	m	40	T	35			1.5		150	m	
2N696A	2N2218		SNA	0.8	A	35	O	1.0	20	150	m	40	T	35			1.5		150	m	5/31
★ 2N697			SNA	0.6	A	40	R		40	150	m	40	T	35			1.5		150	m	5/31
2N697A	2N2218		SNA	0.8	A	35	O	1.0	40	150	m	50	T	35			1.5		150	m	5/31
2N698	2N3498		SNA	0.8	A	80	R		20	150	m	40	T	15			1.2		50	m	5/
★ 2N699		1	SNA	2.0	C	80	R		40	150	m	50	T	20			5.0		150	m	5/
2N699A	2N3498		SNA	2.0	C	80	R		40	150	m	50	T	20			5.0		150	m	39/79
2N699B	2N3498		SNA	0.87	A	100	R		40	150	m	60	T	15			1.2		50	m	5/
2N700			GPF	.075	A	20	O	0.05	1.5	2.0	m	500	T	1.5			20	10	70	M	17/
2N700A			GPF	.075	A	25	O	0.05	1.5	2.0	m	1000	T	1.4			22	10	70	M	17/
★ 2N702		1	SNA	0.3	A	25	O	0.05	20	10	m	70	T	6.0			.5		10	m	
★ 2N703		1	SNA	0.3	A	25	O		40	10	m	70	T	6.0			.5		10	m	18/22

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max @ I_C/I_B	NF @ f dB Max & I_C	Unit	PACKAGE To-Case No. No.
★ 2N705		1	GPS	0.3	C	15	S	0.05	25	10 m				*75/200*		.3		*10 m*	18/22
2N705A			GPA	0.15	A	15	S	0.1	25	10 m			8.0			.3		*10 m*	
★ 2N706		1	SNG	0.3	A	20	R		20	10 m	200	T	6.0	*40/75*		.6		*10 m*	18/22
2N706A		1	SNG	0.3	A	20	R	0.05	20	10 m	200	T	5.0	*40/75*		.6		*10 m*	18/22
★ 2N706B		1	SNG	0.3	A	15	O	0.05	20	10 m	200	T	5.0	*40/75*		.4		*10 m*	18/22
2N706C	2N835		SNG	0.36	A	20	R	0.05	20	10 m	200	T	5.0	*40/75*		.4		*10 m*	18/
★ 2N707			SNA	1.0	C	28	R	0.1	9.0	10 m	70	T	10			.6		*10 m*	18/
★ 2N707A			SNA	1.2	C	40	O	0.1	9.0	10 m	70	T	6.0			.6		*10 m*	18/
★ 2N708		1	SNA	0.36	A	20	R		30	10 m	300	T	6.0			.4		*10 m*	18/22
2N708A	2N834		SNA	0.36	A	30	R		40	10 m	300	T				.15		*10 m*	18/
2N709			SNA	0.3	A	6.0	O		20	10 m	600	T				.3		*3.0 m*	18/
2N709A			SNS	0.3	A	6.0	O		30	10 m	800	T	3.0	*15/15*		.3		*3.0 m*	18/
2N710	2N705		GPA	0.3	C	15	S	0.05	25	10 u						.5		*10 m*	
2N710A			GPG	0.15	A	15	S	0.05	25	10 m			8.0	*75/125*		.5		*10 m*	18/
★ 2N711			GPA	0.15	A	12	S	0.05	20	10 m	150	T				.5		*10 m*	18/22
★ 2N711A		1	GPG	0.15	A	7.0	O	0.1	25	10 m	150	T	6.0	*200/150*		.55		*50 m*	18/22
★ 2N711B		1	GPG	0.15	A	7.0	O	0.1	30	10 m	150	T	6.0	*100/240*		.25		*10 m*	18/22
2N715	2N2221		SNA	0.5	A	35	O	0.1	10	15 m	700	E	6.0			*1.2*		*15 m*	18/
2N716	2N2221		SNA	0.5	A	40	O		10	15 m	700	E				*1.2*		*15 m*	
2N717	2N2221	1	SNA	0.4	A	40	R		20	150 m	40	T	35			*1.5*		*150 m*	18/
★ 2N718		1	SNA	0.4	A	40	R		40	150 m	50	T	35			*1.5*		*150 m*	18/22
★ 2N718A		1	SNE	0.5	A	50	R		40	150 m	60	T	25				12	**1000 H**	18/22
2N719	2N3498		SNA	0.4	A	80	R		20	150 m	40	T	85			*5.0*		*150 m*	18/
2N719A	2N3498		SNA	0.5	A	80	R	1.0	20	150 m	40	T	15			*1.2*		*50 m*	18/
2N720	2N3498		SNA	0.4	A	80	R		40	150 m	50	T	85			*5.0*		*150 m*	18/
★ 2N720A		1	SNA	0.5	A	100	R		40	150 m	50	T	15			*5.0*		*150 m*	18/22
2N721			SPA	0.4	A	50	R		20	150 m	50	T	45			*1.5*		*150 m*	18/
2N721A	2N2905		SPA	0.5	A	50	R		20	150 m	50	T	40			*.5*		*150 m*	18/
2N722			SPA	0.4	A	50	R		30	150 m	60	T	45			*1.5*		*150 m*	18/
2N722A	2N2837		SPA	0.5	A	50	R		30	150 m	60	T				*.5*		*150 m*	
D 2N725			GPA	0.15	A	12	S	0.05	20	10 m									18/
2N726	2N727		SPA	0.3	A	20	O	0.05	15	10 m	140	T	5.0			.6		*10 m*	18/22
★ 2N727		1	SPA	0.3	A	20	O	0.05	30	10 m	140	T	5.0			.6		*10 m*	18/
D 2N728	2N2539		SNA	0.4	A	15	O	0.1	20	10 m	100	T	12			.7		*10 m*	18/
D 2N729	2N2539		SNA	0.4	A	30	O	0.1	20	10 m	100	T	12			.7		*10 m*	18/
2N730	2N2218		SNA	0.5	A	40	R	1.0	20	150 m	40	T	35			*1.5*		*150 m*	18/
★ 2N731			SNA	0.5	A	40	R	1.0	40	150 m	25	T	35			*1.5*		*150 m*	18/
2N734	2N2221		SNA	0.5	A	60	O	0.05	15	5.0 m			10			*1.0*		*10 m*	18/
2N734A	2N2218A		SNA	0.5	A	60	O	0.05	15	5.0 m	30	T	6.0			*.5*		*10 m*	18/
★ 2N735			SNA	0.5	A	60	O	0.05	30	5.0 m			10			*1.0*		*10 m*	18/
2N735A	2N2218A		SNA	0.5	A	60	O	0.05	30	5.0 m	60	T	6.0			*.5*		*10 m*	
★ 2N736	2N2222	1	SNA	0.5	A	60	O	0.05	60	5.0 m			10			*1.0*		*10 m*	18/
2N736A	2N2222		SNA	0.5	A	60	O	0.1	60	5.0 m	100	T				*.6*		*10 m*	18/
2N736B	2N2896		SNA	0.5	A	60	O	0.1	60	5.0 m	100	T	6.0			*.5*		*10 m*	18/
2N738	2N2896		SNA	0.5	A	80	O	0.05	15	5.0 m						*1.0*		*10 m*	18/
2N738A	2N2896		SNA	0.5	A	80	O	0.05	15	5.0 m	30	T	6.0			*.5*		*10 m*	18/
★ 2N739		1	SNA	0.5	A	80	O	0.05	30	5.0 m		U	10			*1.0*		*10 m*	18/
2N739A	2N2896		SNA	0.5	A	80	O	0.05	30	5.0 m	60	T	6.0			*.5*		*10 m*	18/
★ 2N740		1	SNA	0.5	A	80	O	0.05	60	5.0 m			10						
2N740A	2N2896		SNA	0.5	A	80	O	0.05	60	5.0 m	100	T	6.0						18/
★ 2N741		1	GPA	0.15	A	15	S	0.1	10	5.0 m			10						18/
★ 2N741A		1	GPA	0.15	A	20	S	0.1	10	5.0 m	300	T	10						18/
2N742	2N2218		SNG	0.5	A	60	O	0.1	25	10 m			8.0	*50/250*		*.5*		*10 m*	18/
2N742A	2N2218		SNG	0.5	A	60	O	0.1	25	10 m			8.0	*50/250*		*.5*		*10 m*	18/
★ 2N743			SNS	0.3	A	12	O	0.2	20	10 m	200	T	5.0	*16/24*		*.35*		*10 m*	18/
2N743A	2N2369		SNA	0.36	A	15	O	0.2	20	10 m	500	T	4.0						18/
★ 2N744		1	SNS	0.3	A	12	O	0.2	40	10 m	300	T	5.0	*16/24*		*.35*		*10 m*	18/
2N744A	2N2369		SNA	0.36	A	15	O	0.2	40	10 m	500	T	4.0						18/
D 2N745	2N2221		SNG	0.15	A	30	O	0.02	20	10 m	8.0	T	3.0	*350/400*					
D 2N746	2N2221		SNG	0.15	A	30	O	0.02	45	10 m	8.0	T		*350/700*					
D 2N747	2N2221		SNA	0.2	A	25	O	0.05	30	10 m			8.0			*.6*		*5.0 m*	
D 2N748	2N2221		SNA	0.2	A	30	O	0.05	20	10 m			8.0			*.5*		*5.0 m*	
D 2N749	2N2221		SNE	0.2	A	25	O	0.05	15	10 m	40	T	10				30	**1000 H**	
D 2N751	2N2221		SNE	0.2	A	20	O	0.05	30	10 m	16	T	10				40	**1000 H**	
2N752	2N2221		SNA	0.5	A	45	O	0.1			200	T	5.0			*1.2*		*15 m*	18/
★ 2N753		1	SNG	0.3	A	20	R	0.05	40	10 m	200	T	5.0	*40/75*		*.6*		*10 m*	18/
2N754			SNA	0.3	A	60	R	0.05	20	5.0 m	30	T	10			*.8*		*10 m*	18/
2N755			SNA	0.3	A	80	R	0.05	20	5.0 m	30	T	10			*.8*		*10 m*	18/
2N756	2N2218		SNA	0.5	A	45	O	0.1			40	B	8.0			*1.0*		*10 m*	18/
2N756A			SNA	0.5	A	60	O	0.1			40	B				*1.0*		*10 m*	18/

	TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} Min	@ I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF dB Max @ I_C/I_B	@ f & I_C	Unit	PACKAGE To-Case No. No.
	2N757	2N2218		SNA	0.5	A	45	O	0.1				40	B	8.0			1.0		10	m	18/
	2N757A			SNA	0.5	A	60	O	0.1				40	B				1.0		10	m	18/
	2N758	2N2218		SNA	0.5	A	45	O	0.1				40	B	8.0			1.0		10	m	18/
	2N758A			SNA	0.5	A	60	O	0.1				40	B				1.0		10	m	18/
	2N758B			SNA	0.5	A	60	O	0.1	12	1.0	m	40	B	6.0			.5		10	m	18/
	2N759	2N2218		SNA	0.5	A	45	O	0.1				40	B	8.0			1.0		10	m	18/
	2N759A	2N3019		SNA	0.5	A	60	O	0.1				40	B				1.0		10	m	18/
	2N759B	2N3019		SNA	0.5	A	60	O	0.1	25	1.0	m	40	B	6.0			.5		10	m	18/
	2N760	2N2218		SNA	0.5	A	45	O	0.1				40	B	8.0			1.0		10	m	18/
	2N760A	2N3019		SNA	0.5	A	60	O	0.1				40	B				1.0		10	m	18/
	2N760B	2N3019		SNA	0.5	A	60	O	0.1	50	1.0	m	40	B	60							18/
	2N761	2N2218A		SNA	0.5	A	30	O	0.1	20	10	m	40	B	6.0			1.0		10	m	18/
	2N762	2N2218A		SNA	0.5	A	30	O	0.1	45	10	m	40	B	6.0			1.0		10	m	18/
	2N764	THRU		THY	Table 6																	
	2N767			THY	Table 6																	
	2N768	2N961		GPA	.035	A	10	S	0.1	25	2.0	m	125	T				.13		2.0	m	18/
	2N769	2N961		GPA	.035	A	7.0	O	0.1	25	20	m	100	T	3.0			.25		10	m	18/
D	2N770	2N3014		SNA	0.15	A	15	O	0.1	12	20	m	75	T	3.5			.25		10	m	18/
D	2N771	2N3014		SNA	0.15	A	15	O	0.1	30	20	m	100	T	3.5			.25		10	m	18/
D	2N772	2N3014		SNA	0.15	A	25	O	0.1	20	10	m	75	T	3.5			.25		10	m	18/
D	2N773	2N3014		SNA	0.15	A	15	O	0.1	4.0	1.5	m										18/
D	2N774	2N3014		SNA	0.15	A	15	O	0.1	7.0	1.5	m										18/
D	2N775	2N3014		SNA	0.15	A	15	O	0.1	20	1.5	m										18/
D	2N776	2N3014		SNA	0.15	A	15	O	0.1	4.0	1.5	m										18/
D	2N777	2N3014		SNA	0.15	A	15	O	0.1	7.0	1.5	m										18/
D	2N778	2N3014		SNA	0.15	A	15	O	0.1	20	1.5	m										18/
	2N779	2N964		GPA	0.06	A	15	S	0.05	50	10	m	320	T	2.5			.16		10	m	18/
	2N779A	2N964		GPA	0.06	A	15	S	0.1	50	10	m	320	T	2.5			.12		10	m	18/
D	2N779B	2N964		GPA	0.15	A	15	S		50	10	m	320	T	2.5			.12		10	m	18/
	2N780	2N2220		SNE	1.0	C	45	O	0.05	35			60	T	4.0				7.0	1000	H	18/
D	2N781			GPA	0.15	A	15	S		25	10	m						.16		10	m	
	2N782			GPA	0.15	A	12	S		20	10	m						.20		10	m	
	2N783	2N834		SNA	0.3		20	R		20	10	m	200	T				.25		10	m	
	2N784	2N834		SNA	0.3	A	15	R	0.2	25	10	m	200	T	3.5			.19		10	m	18/
	2N784A	2N834		SNA	0.35	A	20	R		25	10	m	300	T				.65		100	m	
	2N785			GPE	0.05	A	12	S	0.02										2.0	10	K	23/
	2N789	2N3946		SNE	015	A	30	O	0.25				0.8	B	10				30	1000	H	
D	2N790	2N3946		SNE	0.15	A	30	O	0.25				1.6	B	10				30	1000	H	
D	2N791	2N3946		SNE	0.15	A	30	O	0.25				6.4	B	10				30	1000	H	
D	2N792	2N3946		SNE	0.15	A	30	O	0.25				1.6	B	10				30	1000	H	
D	2N793	2N3946		SNE	0.15	A	30	O	0.25				1.6	B	10				30	1000	H	
	2N794			GPA	0.12	A			0.1	30	10	m	25	T	12			.3		10	m	
	2N795			GPA	0.12	A			0.1	30	10	m	35	T	12			.5		50	m	
	2N796			GPA	0.12	A			0.1	50	10	m	50	T	12			.5		40	m	18/
	2N797			GNG	0.15	A	7.0	O	0.15	40	10	m	600	T	4.0	40/80		.14		10	m	18/
D	2N799			GPA	.075	A	12	O	0.1	30	12	m	3.2	B	20			.15		12	m	18/
D	2N800			GPA	.075	A	12	O	0.1	30			3.2	B	20			.15		12	m	
D	2N801			GPG	.075	A	18	O	0.4	30					20	1000/610						
D	2N802			GPG	.075	A	18	O	0.4	30					20	1000/610						
D	2N803			GPG	.075	A	15	O	0.4	40					20	810/610						
D	2N804			GPG	.075	A	15	O	0.4	40					20	810/610						
D	2N805			GPG	.075	A	12	O	0.4	60					20	810/560						
D	2N806			GPG	.075	A	12	O	0.4	60					20	810/560						
D	2N807			GPA	0.07	A	14	V	0.1	40	20	m	11.2	B				.2		20	m	
D	2N808			GPA	0.07	A	14	V	0.1	40	20	m	11.2	B				.2		20	m	
D	2N809			GPA	.075	A	15	O	0.2	25	25	m	2.4	B	20							
D	2N810			GPA	.075	A	15	O	0.2	25	25	m	2.4	B	20							
D	2N811			GPA	.075	A	12	O	0.2	45	45	m	4.0	B	20							
D	2N812			GPA	.075	A	12	O	0.2	45	45	m	4.0	B	20							
D	2N813			GPA	.075	A	10	O	0.2	55	55	m	12	B	20							
D	2N814			GPA	.075	A	10	O	0.2	55	55	m	12	B	20							
D	2N815			GNG	.075	A	15	O	0.2	60	30	m			20	1000/1400		.75		200	m	
D	2N816			GNG	.075	A	15	O	0.2	60	30	m			20	1000/1400		.75		200	m	
D	2N817			GNG	.075	A	15	O	0.4	20	50	m			20	1000/610		.25		50	m	
D	2N818			GNG	.075	A	15	O	0.4	20	50	m			20	1000/610		.25		50	m	
D	2N819			GNG	.075	A	20	O	0.4	30	50	m			20	800/610		.25		50	m	
D	2N820			GNG	.075	A	20	O	0.4	30	50	m			20	800/610		.25		50	m	
D	2N821			GNG	.075	A	25	O	0.4	40	50	m			20	810/560		.25		50	m	
D	2N822			GNG	.075	A	25	O	0.4	40	50	m			20	810/560		.25		50	m	
D	2N823			GNA	.075	A	12	O	0.1	40	20	m	3.2	B	20			.15		12	m	

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF dB Max	@ f & I_C	Unit	PACKAGE To-Case No.	No.
															t_{on} ns Max	t_{off} ns Max	$V_{CE(sat)}$ Volts Max	@ I_C / I_B				
D 2N824			GPA	.070	A	18	O	0.2				1.6	B	18								
D 2N825			GPG	.070	A	20	O	0.4	40			2.0	B	20	1000/1100							
D 2N826			GPA	.070	A	20	O	0.4	20			2.0	B	20								
★ 2N827		1	GPA	0.15	A	20	S	0.1	100	10	m	250	T	9.0			.25		10	m	18/22	
★ 2N828		1	GPA	0.15	A	15	S	0.2	25	10	m	300	T				.2		10	m	18/22	
★ 2N828A		1	GPG	0.15	A	15	S	0.2	25	10	m	300	T	4.0	/100		.2		10	m	18/22	
★ 2N829			GPG	0.15	A	15	S	0.2	50	10	m	300	T	4.0	/100		.2		10	m	18/22	
★ 2N834		1	SNG	0.3	A	30	S	0.2	25	10	m	350	T	4.0	33/75		.25		10	m	18/22	
2N834A			SNS	0.36	A	30	S	0.2	25	10	m	500	T	4.0	16/34		.25		10	m		
★ 2N835		1	SNS	0.3	A	20	O	0.2	20	10	m	300	T	4.0	20/35		.3		10	m	18/22	
2N837			GPG	0.15	A	12	S	0.1	30	10	m			9.0	30/90		.25		10	m	18/	
★ 2N838		1	GPS	0.15	A	30	S	0.1	30	10	m	300	T	4.0	15/25		.18		10	m	18/22	
2N839	2N2222		SNA	0.3	A	45	O	0.05	15	10	m	30	T	15			2.0		10	m		
2N840			SNA	0.3	A	45	O	0.05	30	10	m	30	T	15			2.0		10	m	18/	
★ 2N841		1	SNA	0.3	A	45	O	0.05	60	10	m	40	T	15			2.0		10	m	18/22	
2N842	2N2221		SNA	0.3	A	45	O	0.05	20	10	m	30	T	10			1.2		10	m	18/	
2N843	2N2222	1	SNA	0.3	A	45	O	0.05	45	10	m	40	T	10			1.2		10	m	18/	
2N844	2N2896		SNA	0.3	A	60	R	0.05	40	5.0	m	50	T	10			.8		10	m	18/	
2N845	2N2896		SNA	0.3	A	80	R	0.05	40	5.0	m	50	T	10			.8		10	m	18/	
D 2N846	2N960		GPA	0.06	A	15	S	0.1	25	10	m	320	T	2.5			.18		10	m	18/	
2N846A	2N960		GPA	0.06	A	15	S	0.1	25	10	m	320	T	2.5			.14		10	m		
D 2N846B	2N960		GPA	0.15	A	15	S	0.1	25	10	m	320	T	2.5			.14		10	m	18/	
D 2N847	2N835		SNG	0.2	A	15	O	0.05								32/58	1.5		10	m		
D 2N848	2N834		SNG	0.2	A	25	O	0.05								32/58	1.5		10	m		
2N849	2N835		SNG	0.3	A	15	O	0.05	20	10	m	600	T	5.0	40/75		B6		10	m		
2N850	2N834		SNG	0.3	A	15	O	0.05	40	10	m	600	T	5.0	40/75		.6		10	m		
2N851	2N835		SNA	0.3	A	12	O	0.2	20	10	m	300	T									
2N852	2N834		SNA	0.3	A	12	O	0.2	40	10	m	300	T									
2N858	2N2906		SPG	0.15	A	40	O	0.05	10	5.0	m	5.0	T	12	300/450		.15		5.0	m	18/	
2N859	2N2906		SPG	0.15	A	40	O	0.05	25	5.0	m	6.0	T	9.0	250/500		.15		5.0	m	18/	
2N860	2N2906		SPG	0.15	A	25	O	0.05	10	5.0	m	6.5	T	9.0	230/380		.15		5.0	m	18/	
2N861	2N2906		SPG	0.15	A	25	O	0.05	25	5.0	m	7.5	T	9.0	210/360		.15		5.0	m	18/	
2N862	2N2906		SPG	0.15	A	15	O	0.05	12	5.0	m	8.0	T	9.0	200/350		.15		5.0	m	18/	
2N863	2N2906		SPG	0.15	A	15	O	0.05	25	5.0	m	10	T	9.0	175/325		.15		5.0	m	18/	
2N864	2N2906		SPG	0.15	A	6.0	O	0.05	20	5.0	m	16	T	9.0	150/300		.1		5.0	m	18/	
2N864A	2N2906		SPG	0.3	A	6.0	O	0.1	20	5.0	m	16	T	9.0	150/300						18/	
2N865	2N2906		SPG	0.15	A	6.0	O	0.05	45	5.0	m	24	T		100/250		.1		5.0	m	18/	
2N865A	2N2906		SPG	0.3	A	10	O	0.1	45	5.0	m	24	T	9.0	100/250		.1		5.0	m	18/	
D 2N866	2N2906		SNG	0.5	A	20	R	0.6	15	150	m	40	T	45	/150						18/	
D 2N867	2N2906		SNG	0.5	A	20	R	0.6	30	150	m	50	T	45	/150		1.5		150	m	18/22	
★ 2N869		1	SPA	0.36	A	18	O		20	10	m	100	T	9.0			1.0		10	m	18/22	
★ 2N869A		1	SPG	0.36	A	18	O	0.2	40	30	m	400	T	6.0	50/80		.15		10	m	18/	
2N870			SNA	0.5	A	80	R		40	150	m	50	T	15			1.2		50	m	18/	
2N871	2N2895		SNA	0.5	A	80	R		100	150	m	60	T	15								
D 2N876	THRU		THY	Table 6																		
D 2N901			THY	Table 6																		
D 2N902	2N2221		SNE	0.15	A	30	O	0.25				1.0	T	30				30	1000	H		
D 2N903	2N2221		SNE	0.15	A	30	O	0.25				2.0	T	10				30	1000	H		
D 2N904	2N2221		SNE	0.15	A	30	O	0.25				8.0	T	10				30	1000	H		
D 2N905	2N2221		SNE	0.15	A	30	O	0.25				2.0	T	10				30	1000	H		
D 2N906	2N2221		SNE	0.15	A	30	O	0.25				2.0	T	10				30	1000	H		
D 2N907	2N2221		SNG	0.15	A	30	O	0.02	20	10	m	12	T	3.0	350/400							
D 2N908	2N2221		SNG	0.15	A	30	O	0.02	45	10	m	25	T	3.0	350/700							
2N909	2N2222		SNA	0.4	A	30	R		110	50	m	50	T	35			.5		10	m	18/	
★ 2N910		1	SNE	0.5	A	80	R	1.0	75	10	m	60	T	15				12	1000	H	18/22	
2N911			SNA	0.5	A	80	R		35	10	m	50	T				.4		10	m	18/	
2N912	2N2895		SNA	0.5	A	80	R		15	10	m	40	T	15			.4		10	m	18/	
★ 2N914		1	SNS	0.36	A	20	R	0.15	30	10	m	300	T	6.0	40/40		.7		200	m	18/22	
D 2N914A	2N2369		SNA	0.36	A	20	R		30	10	m	300	T				.4		200	m	18/	
★ 2N915		1	SNA	0.36	A	50	O		50	10	m	250	T	3.5			1.0		10	m	18/22	
2N915A			SNE	1.2	C	50	O		50	5.0	m	600	T					4.0	1000	H	18/	
★ 2N916		1	SNA	0.36	A	25	O		50	10	m	300	T	6.0			.5		10	m	18/22	
2N916A	2N918		SNA	0.36	A	25	O		50	10	m	300	T				.5		10	m		
2N916B			SNE	1.2	C	30	O		50	10	m	500	T	3.0				4.0	1000	H	18/	
2N917	2N918	1	SNF	0.2	A	15	O		20	3.0	m	500	T	1.7			9.0	6.0	60	M		
2N917A	2N918		SNF	0.2	A	15	O		20	3.0	m	600	T	3.0				6.0	60	M		
★ 2N918		1	SNF	0.2	A	15	O	0.05	20	3.0	m	600	T	1.7			15	6.0	200	M	72/20	
2N919	2N834		SNA	0.36	A	15	O	0.22	20	10	m	200	T	7.0			.2		10	m	18/	
2N920	2N834		SNA	0.36	A	15	O	0.22	40	10	m	200	T	7.0			.2		10	m	18/	
2N921	2N834		SNA	0.36	A	20	O	0.2	20	10	m	200	T	5.0			.3		10	m	18/	

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	@ I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF @ f dB Max	@ f	Unit	PACKAGE To-Case No.	No.
															t_{on} ns Max	t_{off} ns Max		$V_{CE(sat)}$ Volts Max @ $\frac{I_C}{I_B}$ & I_C				
	2N922		SNA	0.36	A	20	O	0.2	40	10 m		200	T	5.0				.3		10 m		18/
	2N923		SPA	0.25	A	25	O	0.05				0.64	B	20				.5		5.0 m		18/
	2N924		SPA	0.25	A	25	O	0.05				0.64	B	20				.5		5.0 m		18/
	2N925		SPA	0.25	A	40	O	0.05				0.64	B	20				.5		5.0 m		18/
	2N926		SPA	0.25	A	40	O	0.05				0.64	B	20				.5		5.0 m		18/
	2N927		SPA	0.25	A	60	O	0.05				0.64	B	20				.5		5.0 m		18/
	2N928		SPA	0.25	A	60	O	0.05				0.64	B	20				.5		5.0 m		18/
★	2N929	1	SNE	1.8	C	45	O	0.03	40	10 u		30	T	8.0					4.0	1000 H		18/22
★	2N929A	1	SNE	1.8	C	45	O	0.03	40	10 u		45	T	6.0					4.0	1000 H		18/22
★	2N930	1	SNE	1.8	C	45	O	0.03	100	10 u		30	T	8.0					3.0	1000 H		18/22
★	2N930A	1	SNE	1.8	C	45	O	0.03	100	10 u		45	T	6.0					3.0	1000 H		18/
	2N930B		SNE	1.8	C	45	O	0.03	100	10 u		45	T						3.0	1000 H		18/
D	2N934		GPA	0.15	A	12		0.2	40	40 m		35	T	12				.3		40 m		18/
	2N935		SPA	0.25	A	40	O	0.05	9.0									.3		5.0 m		18/
	2N936		SPA	0.25	A	35	O	0.05	18									.5		5.0 m		13/
	2N937		SPA	0.25	A	30	O	0.05	36									.6		5.0 m		18/
	2N938		SPE	0.25	A	35	O	0.1				0.8	B						25	1000 H		18/
	2N939		SPE	0.25	A	35	O	0.1				1.6	B						25	1000 H		18/
	2N940		SPE	0.25	A	35	O	0.1				1.6	B						25	1000 H		18/
	2N941		SPC	0.25	A	8	U	0.05	10	1.0 m		16	T	14								18/
	2N942		SPC	0.25	A	8	U	0.05	10	1.0 m		10	T	14								18/
	2N943		SPC	0.25	A	18	O	0.05	10			0.8	B	14								18/
	2N944		SPC	0.25	A	18	O	0.05	10			0.8	B	14								18/
	2N945		SPC	0.25	A	50	O	0.05	10			0.8	B	14								18/
	2N946		SPC	0.25	A	80	O	0.05	10			0.8	B	14								18/
	2N947		SNA	0.36	A	15	R	0.1	20	10 m		200	T	8.0				.4		5.0 m		18/
	2N948		THY	Table 6																		
	2N951		THY	Table 6																		
	2N955		GNA	0.15	A	8.0	O	0.1	30	30 m				6.0				.5		30 m		18/
	2N955A		GNA	0.15	A	8.0	O	0.1	30	30 m				6.0				.3		30 m		18/
★	2N956	1	SNE	0.5	A	50	R		100	150 m		70	T	25					8.0	1000 H		18/22
	2N957		SNA	0.25	A	20	O		45	10 m		200	T	6.0				1.5		10 m		18/
D	2N958		SNA	0.25	C	15	O	0.2	20	10 m		200	T	7.0				.2		10 m		51/
D	2N959		SNA	0.25	C	15	O	0.2	40	10 m		200	T	7.0				.2		10 m		51/
★	2N960	1	GPG	0.15	A	15	S	0.1	20	10 m		300	T	4.0	50/85			.2		10 m		18/22
★	2N961	1	GPG	0.15	A	12	S	0.1	20	10 m		300	T	4.0	50/85							18/22
★	2N962	1	GPG	0.15	A	12	S	0.1	20	10 m		300	T	4.0	50/85			.2		10 m		18/22
★	2N963	1	GPG	0.15	A	12	S	0.1	20	10 m		250	T	5.0	60/120			.2		10 m		18/22
★	2N964	1	GPG	0.15	A	15	S	0.1	40	10 m		300	T	4.0	50/85			.18		10 m		18/22
★	2N964A	1	GPA	0.15	A	15	S	0.1	40	10 m		300	T	5.0				.18		10 m		18/
★	2N965	1	GPG	0.15	A	12	S	0.1	40	10 m		300	T	4.0	50/85			.18		10 m		18/22
★	2N966	1	GPG	0.15	A	12	S	0.1	40	10 m		300	T	4.0	50/85			.18		10 m		18/22
★	2N967	1	GPG	0.15	A	12	S	0.1	40	10 m		250	T	5.0	60/120			.2		10 m		
★	2N968		GPG	0.15	A	15	S	0.2	17	10 m		300	T	9.0	75/150			.25		10 m		18/22
★	2N969		GPG	0.15	A	12	S	0.2	17	10 m		300	T	9.0	75/150			.25		10 m		18/22
★	2N970		GPG	0.15	A	12	S	0.2	17	10 m		300	T	8.0	100/275			.25		10 m		18/22
★	2N971		GPG	0.15	A	7.0	S	0.2	17	10 m		300	T	8.0	275/300			.25		10 m		18/22
★	2N972		GPG	0.15	A	15	S	0.2	40	10 m		300	T	8.0	175/175			.25		10 m		18/22
★	2N973		GPG	0.15	A	12	S	0.2	40	10 m		300	T	8.0	75/150			.25		10 m		18/22
★	2N974		GPG	0.15	A	12	S	0.2	40	10 m		300	T	8.0	75/275			.25		10 m		18/22
★	2N975		GPG	0.15	A	7.0	S	0.2	40	10 m		300	T	8.0	75/275			.25		10 m		18/22
	2N976		GPA	0.1	A	10	O	0.1	30	20 m		249	T	0.3				.17		20 m		18/
D	2N977		GPS	0.15	A	10	O	0.2	50	40 m		400	T	8.0	10/20			.2		40 m		18/
★	2N978	1	SPA	0.33	A	20	O	0.6	15	150 m		40	T	45				1.5		150 m		18/22
	2N979		GPA	0.06	A	15	O	0.1	30	10 m		100	T	5.0				.25		10 m		18/
	2N980		GPG	0.06	A	12	O	0.1	30	10 m		100	T	3.0	60/120			.25		10 m		18/
	2N981		SNA	0.5	A	80	O	0.1	3.6	1.0 m		40	B	5.0				3.0		10 m		18/
	2N982		GPS	0.06	A	15	O	0.1	50	10 m				2.5	18/18			.12		10 m		18/
	2N983		GPS	0.06	A	15	O	0.1	40	10 m				2.5	18/18			.15		10 m		18/
	2N984		GPS	0.06	A	10	O	0.1	50	10 m				3.0	20/20			.18		10 m		18/
★	2N985	1	GPG	0.15	A	7.0	O	0.2	40	10 m		300	T	6.0	35/80			.15		10 m		18/
	2N986		OPT	Table 10																		
	2N987		GPF	0.1	A	40	O	0.01	40	1.0 m				4.0					9.5	100 M		
	2N988		SNA	0.3	A	10	O	0.22	20	10 m		300	T	4.0				.5		10 m		18/
	2N990		GPF	67	A	20	R	0.01	40	1.0 m		44	T	4.0					9.5	100 M		18/
	2N991		GPA	67	A	20	R	0.01	40	1.0 m		44	T	4.0								
	2N992		GPF	.067	A	20	R	0.01	40	1.0 m									26	10 M		
	2N993		GPF	.067	A	20	R	0.01	40	1.0 m		44	T						3.0	1 M		
	2N994		GPS	0.2	A	6	O	0.15	45	10 m				6.0	35/45			.18		10 m		18/
★	2N995		SPA	0.36	A	15	O		35	20 m		100	T	10				.2		20 m		18/22

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min @ V_{CE} (sat) Volts Max	NF dB Max @ I_C/I_B	f & I_C	Unit	PACKAGE To-Case No.
2N995A	2N3250		SPG	0.36	A	15	O		35	20	m	100	T	6.0	*60/90*		.2		20	m	18/
2N996		1	SPA	0.36	A	12	O		35	20	m	100	T	10			.3		60	m	18/
2N997	2N720A		SNA	0.5	A	40	O	0.3	35	100	u						1.6		100	m	18/
★ 2N998		1	SNE	0.5	A	60	O	0.5	1600	10	m			30				6.0	1000	H	72/20
2N999			SNA	0.5	A	60	O	0.5						20			1.6		100	m	
2N1000			GNG	0.15	A	25	O		40	10	m	5.6	B	20	*700/1000*		.25		100	m	5/
D 2N1003			GPA	0.12	A	20	U							5.0							
D 2N1004			GPA	0.12	A	20	U							5.0							
D 2N1005	2N2242		SNA	0.15	A	15	O	.025	10	10	m						.6		10	m	5/
D 2N1006	2N2242		SNA	0.15	A	15	O	.025	25	10	m						.6		10	m	5/
2N1007			GPA	35	C	20	O	3.0	50	1.0	A	0.060	T				1.0		2.0	A	3/
★ 2N1008		1	GPA	0.3	C	15	R	0.3	40								.25		.1	A	5/31
★ 2N1008A		1	GPA	0.3	C	35	R	0.3	40								.25		.1	A	5/31
★ 2N1008B		1	GPA	0.3	C	55	R	0.3	40								.25		.1	A	5/31
D 2N1009			GPA	0.4	C	35	R										.25		.1	A	
2N1010			GNA	0.02	A	10	O	.002													
★ 2N1011		1	GPA	35	C	80	S	5.0	30	3.0	A	0.15	E				1.5		3.0	A	3/
2N1012			GNG	0.15	A	22	O		40	100	m	120	E	20	*150/200*		.2		100	m	5/
D 2N1014			GPA	50	C	65	O	5.0	20	4.0	A	0.4	B				.8		4.0	A	
2N1015	2N3713		SNA	150	C	30	V	7.5	10	2.0	A						1.5		2.0	A	
2N1015A	2N3713		SNA	150	C	60	V	7.5	10	2.0	A						1.5		2.0	A	
2N1015B	2N5758		SNA	150	C	100	V	7.5	10	2.0	A						1.5		2.0	A	
2N1015C	2N5760		SNA	150	C	150	V	7.5	10	2.0	A						1.5		2.0	A	
2N1015D	MJ410		SNA	150	C	200	V	7.5	10	2.0	A						1.5		2.0	A	
2N1015E	MJ411		SNA	150	C	250	V	7.5	10	2.0	A						1.5		2.0	A	
2N1015F	MJ411		SNA	150	C	300	V	7.5	10	2.0	A						1.5		2.0	A	
2N1016	2N3713		SNA	150	C	30	V	7.5	10	5.0	A						2.5		5.0	A	
2N1016A	2N3713		SNA	150	C	60	V	7.5	10	5.0	A						2.5		5.0	A	
2N1016B	2N3713		SNA	150	C	100	V	7.5	10	5.0	A						2.5		5.0	A	
2N1016C	2N5758		SNA	150	C	150	V	7.5	10	5.0	A						2.5		5.0	A	
2N1016D	2N5760		SNA	150	C	200	V	7.5	10	5.0	A						2.5		5.0	A	
2N1016E	MJ3430		SNA	150	C	250	V	7.5	10	5.0	A						2.5		5.0	A	
2N1016F	MJ3430		SNA	150	C	300	V	7.5	10	5.0	A						2.5		5.0	A	
2N1017			GPA	0.15	A	10	O	0.4	70	20	m	12	B	20			2.6		200	m	
2N1018			GPA	0.2	A	6	O	0.4	70	70	m	16	B	20			2.6		200	m	9/
★ 2N1021		1	GPA	50	C	100	X	5.0	23	1.0	A						1.0		5.0	A	5/
2N1021A			GPA	150	C	50	O	7.0	30	5.0	A	0.2	T				.5		5.0	A	3/
★ 2N1022		1	GPA	50	C	120	X	5.0	23	5.0	A						1.0		5.0	A	3/
2N1022A			GPA	150	C	55	O	7.0	30	5.0	A	0.2	T				.5		5.0	A	
D 2N1023	2N3323		GPA	0.12	A	40	O	0.01	20	1.5	m	96	T	3.0			18				
2N1024	2N3250		SPE	0.25	A	15	U	0.1				0.8	B	7.0				025			5/
2N1025	2N3250		SPE	0.25	A	35	U	0.1				0.8	B	7.0				25			5/
2N1026	2N3250		SPE	0.25	A	35	U	0.1				1.6	B	7.0				25			5/
2N1027	2N3250		SPE	0.25	A	15	U	0.1				3.2	B	7.0				25			5/
2N1028			SPE	0.25	A	10	U	0.1				7.2		7.0				25			5/
D 2N1029	2N1553		GPA	90	C	20	O	15	20	10	A						1.0		10	A	
D 2N1029A	2N1554		GPA	90	C	30	O	15	20	10	A						1.0		10	A	
D 2N1029B	2N1555		GPA	90	C	60	O	15	20	10	A						1.0		10	A	
D 2N1029C	2N1556		GPA	90	C	70	O	15	20	10	A						1.0		10	A	
D 2N1030	2N1557		GPA	90	C	20	O	15	50	10	A						1.0		10	A	
D 2N1030A	2N1558		GPA	90	C	30	O	15	50	10	A						1.0		10	A	41/
D 2N1030B	2N1559		GPA	90	C	60	O	15	50	10	A						1.0		10	A	41/
D 2N1030C	2N1560		GPA	90	C	70	O	15	50	10	A						1.0		10	A	41/
2N1031	2N1553		GPA	90	C	30	S	15	20	10	A	0.04	E				1.0		10	A	41/
2N1031A	2N1554		GPA	90	C	40	S	15	20	10	A	0.04	E				1.0		10	A	41/
2N1031B	2N1555		GPA	90	C	70	S	15	20	10	A	0.04	E				1.0		10	A	41/
2N1031C	2N1556		GPA	90	C	80	S	15	20	10	A	0.04	E				1.0		10	A	41/
2N1032			GPA	90	C	30	S	15	50	10	A	0.1	E				1.0		10	A	41/
2N1032A			GPA	90	C	40	S	15	50	10	A	0.1	E				1.0		10	A	41/
2N1032B			GPA	90	C	70	S	15	50	10	A	0.1	E				1.0		10	A	41/
2N1032C			GPA	90	C	80	S	15	50	10	A	0.1	E				1.0		10	A	41/
2N1034			SPA	0.25	A	40	O	0.05				0.12	B				.5		8.0	m	5/
2N1035			SPA	0.25	A	35	O	0.05				0.16	B				.4		8.0	m	5/
2N1036			SPA	0.25	A	30	O	0.05		0		0.24	B				.3		8.0	m	5/
2N1037			SPA	0.25	A	35	O	0.05				0.12	B				.5		8.0	m	5/
★ 2N1038		1	GPA	20	C	40	V	3.0	20	1.0	A	0.16	E				.25		1.0	A	/180
★ 2N1039		1	GPA	20	C	60	V	3.0	20	1.0	A	0.16	E				.25		1.0	A	/180
★ 2N1040		1	GPA	20	C	80	V	3.0	20	1.0	A	0.16	E				.25		1.0	A	/180
★ 2N1041		1	GPA	20	C	100	V	3.0	20	1.0	A	0.16	E				.25		1.0	A	/180
★ 2N1042		1	GPA	20	C	40	V	3.5	20	3.0	A	0.25	T				.25		1.0	A	/184

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF dB Max @ I_C/I_B	@ f & I_C	Unit	PACKAGE To-Case No. No.
★ 2N1043		1	GPA	20	C	60	V	3.5	20	3.0 A	0.25	T				.75		3.0 A		/184
★ 2N1044		1	GPA	20	C	80	V	3.5	20	3.0 A	0.25	T				.25		1.0 A		/184
★ 2N1045		1	GPA	20	C	100	V	3.5	20	3.0 A	0.25	T				.25		1.0 A		/184
2N1046			GPA	50	C	50	O	12	40	5.0 A	15	T				.2		500 m		3/
2N1046A			GPA	50	C	50	O	12	40	5.0 A	15	T				.4		5.0 A		3/
2N1046B			GPA	50	C	50	O	12	20	10 A	15	T				.4		5.0 A		3/
2N1047			SNA	40	C	80	B	0.5	12	500 m						7.5		500 m		
2N1047A			SNA	40	C	80	O	0.5	12	500 m	2.25	E				7.5		500 m		57/
2N1047B			SNA	40	C	80	O	0.75	12	500 m	3.75	E				2.0		500 m		
D 2N1047C			SNA	40	C	80	O	1.0	12	500 m	3.75	E				1.0		500 m		
2N1048			SNA	40	C	120	B	0.5	12	500 m						7.5		500 m		
2N1048A			SNA	40	C	120	O	0.5	12	500 m	2.25	E				7.5		500 m		57/
2N1048B			SNA	40	C	120	O	0.75	12	500 m	3.75	E				2.0		500 m		
D 2N1048C			SNA	40	C	120	O	1.0	12	500 m	3.75	E				1.0		500 m		
2N1049	2N4239		SNA	40	C	80	B	0.5	30	500 m	2.25	E				7.5		500 m		57/
2N1049A	2N4239		SNA	40	C	80	O	0.5	30	500 m	2.25	E				7.5		500 m		57/
2N1049B	2N4239		SNA	40	C	80	O	0.75	30	500 m	3.75	E				2.0		500 m		57/
D 2N1049C			SNA	40	C	80	O	1.0	30	500 m	3.75	E				1.0		500 m		57/
2N1050	2N5681		SNA	40	C	120	B	0.5	30	500 m						7.5		500 m		57/
2N1050A	2N5682		SNA	40	C	120	O	0.5	30	500 m	2.25	E				7.5		500 m		57/
2N1050B	2N5682		SNA	40	C	120	O	0.75	30	500 m	3.75	E				2.0		500 m		57/
D 2N1050C			SNA	40	C	80	O	1.0	30	500 m	3.75	E				1.0		500 m		58/
2N1051	2N2218		SNA	0.5	A	40	O		25	50 m	80	T				3.0		50 m		
2N1052			SNA	0.6	A	180	S	0.2	20	0.2 A						5.0		.2 A		5/
2N1053			SNA	0.6	A	200	S	0.2	20	0.2 A										5/
2N1054	MPSL01		SNA	0.6	A	115	O	0.75	20	0.2 A	8.0	T	120							5/
2N1055	2N4410		SNA	0.6	A	100	O	0.2	20	50 m	3.0	T	100			2.0		50 m		5/
D 2N1056	2N2043		GPA	0.24	A	50	R	0.3	18	20 m	0.4	B	60			.13		20 m		5/
2N1057	2N1924		GPA	0.24	A	45	V	0.3	34	20 m	0.4	B	60			.13		20 m		
2N1058			GNA	0.05	A	20	R	0.05			3.2	B								22/
2N1059			GNA	0.18	A	15	R	0.1		10 m	0.2	E								22/
2N1060	2N2501		SNG	0.25	A	40	O	0.05	17	5.0 m			10	500/500		.3		5.0 m		28/
D 2N1065			GPA	0.12	A	20	O		20		10	T	7.0			.25		10 m		9/
2N1066	2N3323		GPA	0.12	A	40	O	0.01	20	1.5 m			3.0			18				
2N1067	2N4237		SNA	5.0	C	30	O	0.5	15	200 m	0.6	B				2.0		200 m		8/
2N1068	2N4237		SNA	10	C	30	O	1.5	15	750 m	0.6	B				2.0		200 m		8/
2N1069	2N5067		SNA	50	C	45	O	4.0	20	1.5 A	0.4	B				1.3		.5 A		3/
2N1070	2N5067		SNA	50	C	45	O	4.0	20	1.5 A	0.4	B				.5		1.5 A		3/
D 2N1072	2N3766		SNG	2.0	A	30	O	2.0	20	.75 A				100/300		2.0		.75 A		
★ 2N1073		1	GPA	85	C	40	R	10	20	5.0 A						1.0		5.0 A		41/
★ 2N1073A		1	GPA	8.5	C	80	R	10	20	5.0 A						1.0		5.0 A		41/
★ 2N1073B		1	GPA	85	C	120	R	10	20	5.0 A						1.0		5.0 A		41/
D 2N1074	2N2218		SNA	0.25	A	40	O	0.05			0.16	B	70							5/
D 2N1075	2N2218		SNA	0.25	A	35	O	0.05			0.2	B	70							5/
D 2N1076	2N2218		SNA	0.25	A	30	O	0.05			0.24	B	70							5/
D 2N1077	2N2218		SNA	0.25	A	35	O	0.05			0.16	B	70			1.0		8.0 m		5/
2N1078			GPA	20	C	60	S	3.0	40	0.5 A						1.0		1.0 A		18/
2N1079	2N5068		SNA	60	C	60	S	3.0	20	1.0 A	10	T				3.0		1.0 A		53/
2N1080	2N4914		SNA	60	C	60	S	3.0	20	2.0 A	10	T				5.0		2.0 A		53/
D 2N1081	2N2221		SNA	0.6	A	40	O	0.75	20	0.5 A			100			4.0		.5 A		5/
D 2N1082	2N2221		SNF	0.2	A	25	S	0.05	10	10 m	17	T				20	12	4 M		5/
2N1086			GNA	.065	A	9	O		17	1.0 m										
2N1086A			GNA	.065	A	9	O		17	1.0 m										
2N1087			GNA	.065	A	9	O		17	1.0 m										
2N1090			GNA	0.12	A	25	B	0.4	30	20 m	4.0	B				.2		20 m		9/
2N1091			GNA	0.12	A	25	B	0.4	40	20 m	8.0	B				.3		200 m		9/
2N1092	2N4237		SNA	2.0	A	30	O	0.5	15	200 m	0.6	B				2.0		200 m		5/
2N1093			GPA	0.15	A	15	O	0.3	50	20 m	4.0	B				.2		20 m		5/
D 2N1094			GPF	0.15	A	15	O	0.04	15	4.0 m	560	M	3.0				12	2 M		28/
2N1097	2N1414		GPA	0.2	A	18	R	0.2	34	20 m	0.8	B	40							5/
2N1098	2N1414		GPA	0.2	A	18	R	0.2	25	20 m	0.8	B	40							5/
★ 2N1099		1	GPA	50	C	70	S	15	35	5.0 A	0.1	E				.7		12 A		36/
★ 2N1100		1	GPA	50	C	65	O	15	25	5.0 A						.7		12 A		36/
2N1101			GNA	0.18	A	15	R		25	35 m	0.25	E				.5		100 m		
2N1102			GNA	0.18	A	25	R		25	35 m	0.25	E				.5		100 m		
D 2N1103	2N2221		SNG	.125	A	35	O	0.02	30	10 m	8.0	B	3.0	500/1000		1.5		10 m		43/
2N1104	2N2221		SNG	.125	A	35	O	0.02	45	10 m	16	B	3.0	500/1000		1.5		10 m		43/
D 2N1105	MM3005		SNA	0.8	A	60	O	0.5	12	200 m						5.0		200 m		43/
D 2N1106	MM3007		SNA	0.8	A	100	O	0.5	12	200 m						5.0		200 m		43/
2N1107			GPA	0.03	C	16	B	.005			32	B								22/

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / @ I_C/I_B & I_C	Unit	PACKAGE To-Case No. No.
2N1108			GPA	0.03	C	16	B	.005				28	B							22/
2N1109			GPA	0.03	C	16	B	.005				28	B							22/
2N1110			GPA	0.03	C	16	B	.005				28	B							22/
2N1111			GPA	0.03	C	20	B	.005				28	B							22/
2N1114			GNA	0.15	A	15	R	0.2	40	20 m		5.6	B							5/
2N1115			GPA	0.15	A	15	O	.125				4.0	B	20			.35		60 m	
D 2N1115A			GPA	0.15	A	15	O	.125				4.0	B	20			.35		60 m	
2N1116	MM3005		SNA	0.6	C	60	O	0.8	40	0.5 A		6.0	T	100			5.0		.5 A	5/
2N1117	MM3005		SNA	0.6	C	60	O	0.8	40	0.2 A		4.0	T	100			4.0		.2 A	5/
2N1118	2N3250		SPA	0.15	A	25	U	0.05				8.0	M	12						5/
2N1118A	2N3250		SPA	0.15	A	25	U	0.05		15 m		7.2	T	12						5/
2N1119	2N3546		SPA	0.15	A	10	U	0.05	15	15 m		7.2	T	12			.15		5.0 m	5/
★ 2N1120		1	GPA	45	C	70	S	15	20	10 A		0.06	E				1.0		10 A	41/
2N1121			GNA	.065	C	15	O		34	1.0 m										
2N1122	2N961		GPA	.025	A	11	S	0.05	25	10 m		40	T	6.0			.1		8.0 m	24/
2N1122A	2N960		GPA	.025	A	14	S	0.05	25	10 m		40	T	6.0			.1		8.0 m	24/
2N1123	2N3427		GPA	0.01	C	40	S	0.4	40	100 m		2.4	B				.2		10 m	
2N1124	2N651		GPA	0.3	A	35	V	0.15				0.32	B				.2		100 m	
2N1125	2N651		GPA	0.3	A	40	V	0.15	50	500 m		0.8	B				.3		500 m	
D 2N1126	2N651		GPA	1.0	C	35	V	0.15				0.32	B				.2		100 m	
D 2N1127	2N3428		GPA	1.0	C	40	V	0.15	50	500 m		0.8	B				.3		500 m	
2N1128	2N1192		GPA	0.15	A	18	S	0.15												
2N1129	2N3427		GPA	0.15	A	25	V	0.15	100	100 m							.25		100 m	
2N1130	2N1193		GPA	0.15	A	30	B	0.15	50	100 m							.25		100 m	
★ 2N1131			SPA	0.6	A	35	O	0.6	20	150 m		50	T				1.5		150 m	5/
★ 2N1131A			SPS	0.6	A	40	O	0.6	20	.15 A		50	T	30	35/35		1.5		.15 A	
★ 2N1132		1	SPS	0.60	A	35	O	0.6	30	5.0 m		60	T	45	45/35		1.5	10	150 m	39/79
★ 2N1132A		1	SPS	0.60	A	40	O	0.6	30	5.0 m		60	T	30	45/35		1.5	10	150 m	39/79
2N1132B	2N1132A		SPS	0.6	A	45	O	0.6	30	.15 A		60	T	30	45/35		1.5		.15 A	5/
D 2N1135	2N2369		SPA	0.1	A	12	O	0.05				5.6	T							5/
D 2N1135A	2N2369		SPA	0.1	A	12	O	0.05				5.6	T							5/
2N1136			GPA	50	C	30	O	6.0	50	3.0 A		0.2	E				1.0		3.0 A	3/
2N1136A			GPA	50	C	55	O	6.0	50	3.0 A		0.2	E				1.0		3.0 A	3/
2N1136B			GPA	50		65	O	6.0	50	3.0 A		0.2	E				1.0		3.0 A	3/
2N1137			GPA	50		30	O	6.0	75	3.0 A		0.2	E				1.0		3.0 A	3/
2N1137A			GPA	50		55	O	6.0	75	3.0 A		0.2	E				1.0		3.0 A	3/
2N1137B			GPA	50		65	O	6.0	75	3.0 A		0.2	E				1.0		3.0 A	3/
2N1138			GPA	35		30	O	6.0	100	3.0 A		0.2	E				1.0		3.0 A	3/
2N1138A			GPA	35		55	O	6.0	100	3.0 A		0.2	E				1.0		3.0 A	3/
2N1138B			GPA	35		65	O	6.0	100	3.0 A		0.2	E				1.0		3.0 A	3/
2N1139	2N742		SNA	0.5	A	15	O	0.1	20	10 m		100	T	12			.7		10 m	5/
★ 2N1141		1	GPA	0.75	C	35	B	0.1	10	10 m				1.5			2.0		50 m	5/31
2N1141A			GPA	0.75	C	25	S	0.1	15	10 m		500	T				2.0		50 m	
★ 2N1142		1	GPA	0.75	C	30	B	0.1	10	10 m		480	B				2.0		50 m	5/31
2N1142A			GPA	0.75	C	25	S	0.1	15	10 u		400	T				2.0		50 m	
★ 2N1143		1	GPA	0.75	C	25	B	0.1	10	10 m		384	B				2.0		50 m	5/31
2N1143A			GPA	0.75	C	25	S	0.1	15	10 m		400	T				2.0		50 m	
2N1144	2N321		GPA	.175	A	16	R	0.2	34	20 m		0.8	B	60						
2N1145	2N1414		GPA	.175	A	16	R	0.2	25	20 m		0.8	B	60						
2N1146			GPA	87	C	20	O	15	60	5.0 A		9.0	E				1.0		15 A	3/
2N1146A			GPA	87	C	30	O	15	60	5.0 A		9.0	E				1.0		15 A	3/
2N1146B			GPA	87	C	40	O	15	60	5.0 A		9.0	E				1.0		15 A	3/
2N1146C			GPA	87	C	50	O	15	60	5.0 A		9.0	E				1.0		15 A	3/
2N1147			GPA	87	C	20	O	15	60	5.0 A		9.0	E				1.0		15 A	3/
2N1147A			GPA	87	C	30	O	15	60	5.0 A		9.0	E				1.0		15 A	3/
2N1147B			GPA	87	C	40	O	15	60	5.0 A		9.0	E				1.0		15 A	3/
2N1147C			GPA	87	C	50	O	15	60	5.0 A		9.0	E				1.0		15 A	3/
2N1149	2N2221		SNA	0.15	A	45	B	0.25	9.0	25 m		3.2	B							
2N1150	2N2221		SNA	0.15	A	45	B	0.25	18	25 m		4.0	B							
2N1151	2N2221		SNA	0.15	A	45	B	0.25	18	25 m		6.4	B							
2N1152	2N2221		SNA	0.15	A	45	B	0.25	36	25 m		4.8	B							
2N1153	2N2221		SNA	0.15	A	45	B	0.25	76	25 m		5.6	B							
2N1154	2N2221		SNA	0.75	C	50	B	0.06	9.0	60 m										
2N1155	2N2221		SNA	0.75	C	80	B	0.05	9.0	50 m										
2N1156	2N2221		SNA	0.75	C	120	B	0.04	9.0	40 m										
2N1157	MP501		GPA	187	C	45	O	0.04	38	10 A		0.075	T				.8		40 A	
2N1157A	MP502		GPA	187	C	50	O	0.04	38	10 A		0.075	T				.8		40 A	
2N1158	2N1143		GPA	0.06	A	20	S	0.1	5.0	3 m										9/
2N1158A	2N1142		GPA	.075	A	20	S	0.1	9.0	3 m										9/
2N1159	2N3616		GPA	35	C	60	O	5.0	30	3.0 A							1.0		3.0 A	

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C/I_B	& I_C	Unit	PACKAGE To-Case No.
2N1160	2N3616		GPA	35	C	60	O	7.0	20	5.0	A						1.0		5.0	A	
★ 2N1162		1	GPA	90	C	35	S	25	15	25	A	0.015	E				.8		25	A	3/
★ 2N1162A		1	GPA	90	C	35	S	25	15	25	A	0.045	E				.8		25	A	3/
★ 2N1163		1	GPA	90	C	35	S	25	15	25	A	0.015	E				.8		25	A	41/
★ 2N1163A		1	GPA	90	C	35	S	25	15	25	A	0.045	E				.8		25	A	41/
★ 2N1164		1	GPA	90	C	60	S	25	15	25	A	0.015	E				.8		25	A	3/
★ 2N1164A		1	GPA	90	C	60	S	25	15	25	A	0.045	E				.8		25	A	3/
★ 2N1165		1	GPA	90	C	60	S	25	15	25	A	0.015	E				.8		25	A	41/
★ 2N1165A		1	GPA	90	C	60	S	25	15	25	A	0.045	E				.8		25	A	41/
★ 2N1166		1	GPA	90	C	75	S	25	15	25	A	0.015	E				.8		25	A	3/
★ 2N1166A		1	GPA	90	C	75	S	25	15	25	A	0.045	E				.8		25	A	3/
★ 2N1167		1	GPA	90	C	75	S	25	15	25	A	0.015	E				.8		25	A	41/
★ 2N1167A		1	GPA	90	C	75	S	25	15	25	A	0.045	E				.8		25	A	41/
2N1168	2N3614		GPA	45	C	30	R	5.0													
2N1169			GNA	0.12	A	20	O	0.4	20	200	m	3.6	B				.3		200	m	
2N1170			GNA	0.12	A	20	O	0.4	20	200	m	3.6	B				.3		200	m	5/
2N1171			GPA	0.17	A	12	O	0.4	30	30	m	8.0	B	20							5/
2N1172	2N2137		GPA	5.0	C	30	O	1.5	30	100	m										5/
D 2N1173			GNE	0.25	A	20	O	0.2	50	10	m			25	500/1500			8.0	1000	H	37/
D 2N1174			GPE	0.25	A	20	O	0.2	50	10	m			25	500/1500			8.0	1000	H	29/
★ 2N1175		1	GPA	0.2	A	25	R	0.2	70	20	m	1.2	B	40							29/
2N1176	2N1189		GPA	0.3	A	35	R	0.3	20	10	m						.3		.1	A	5/31
2N1176A			GPA	0.3	A	40	O	0.3	20	10	m										5/
2N1176B			GPA	0.3	A	60	O	0.3	20	10	m										5/
D 2N1177	2N2957		GPA	0.08	A	30	B	0.01													45/
D 2N1178	2N2955		GPA	0.08	A	30	B	0.01													45/
D 2N1179	2N2956		GPA	0.08	A	30	B	0.01													45/
D 2N1180	2N2956		GPA	0.08	A	30	B	0.01													45/
2N1182	2N3616		GPA	106	C	60	O	5.0	30	0.5	A	0.15	E				.9		2.0	A	3/
2N1183	2N3616		GPA	7.5	C	20	O	.003	20	400	m	0.4	B				.5		400	m	8/
2N1183A	2N2140		GPA	7.5	C	30	O	.003	20	400	m	0.4	B				.5		400	m	8/
2N1183B	2N2141		GPA	7.5	C	40	O	.003	20	400	m	0.4	B				.5		400	m	8/
2N1184	2N2144		GPA	7.5	C	20	O	.003	40	400	m	0.4	B				.5		400	m	8/
2N1184A	2N2145		GPA	7.5	C	30	O	.003	40	400	m	0.4	B				.5		400	m	8/
2N1184B	2N2146		GPA	7.5	C	40	O	.003	40	400	m	0.4	B				.5		400	m	8/
★ 2N1185		1	GPE	0.2	A	30	R	0.5	130	10	m	1.36	B	25				15	1000	H	5/31
★ 2N1186		1	GPE	0.2	A	45	R	0.5	33	10	m	0.6	B	25				15	1000	H	5/31
★ 2N1187		1	GPE	0.2	A	45	R	0.5	45	10	m	0.8	B	25				15	1000	H	5/31
★ 2N1188		1	GPE	0.2	A	45	R	0.5	80	10	m	0.96	B	25				15	1000	H	5/31
★ 2N1189		1	GPE	0.2	A	30	R	0.5	60	10	m	1.36	B	25				15	1000	H	5/31
★ 2N1190		1	GPE	0.2	A	30	R	0.5	100	10	m	1.76	B	25				15	1000	H	5/31
★ 2N1191		1	GPA	0.2	A	25	R	0.2	20	10	m										5/31
★ 2N1192		1	GPA	0.2	A	25	R	0.2	40	10	m										5/31
★ 2N1193		1	GPA	0.2	A	25	R	0.2	70	10	m										5/31
★ 2N1194		1	GPA	0.2	A	25	R	0.2	125	10	m										5/31
★ 2N1195		1	GPA	.225	A	30	B	0.04				400	T								5/31
2N1196			SPA	0.35	A	70	O	0.1	5.0	2.0	m			4.0							5/
2N1197			SPA	0.35	A	70	O	0.1	5.0	2.0	m			40							5/
2N1198			GNA	.065	A	25	O	.075	17	8.0	m	4.0	B								
2N1199	2N835		SNA	0.15	A	15	O	0.1	12	20	m	75	T				.25		10	m	9/
D 2N1199A	2N835		SNA	0.15	A	15	O	0.1	12	20	m	75	T	3.5			.25		10	m	9/
D 2N1200			SNE	0.1	A	15	O	0.1	7.0	1.5	m			3.5				15			9/
D 2N1201			SNE	0.1	A	15	O	0.1	7.0	1.5	m			3.5				15			9/
2N1202	2N2145		GPA	34	C	60	O		40	500	m	0.2	T				.3		500	m	
2N1203	2N2146		GPA	34	C	70	O		25	2.0	A	0.2	T				.6		2.0	A	
★ 2N1204		1	GPA	0.2	A	15	O	0.5	15	400	m	220	T	8.0			.5		200	m	
★ 2N1204A		1	GPA	0.2	A	15	O	0.5	25	200	m	220	T	6.5			.4		200	m	9/
2N1206	2N3020		SNA	3.0	A	60	O	.015	20			10	T	50							5/31
2N1207	2N3500		SNA	3.0	A	125	O	.015	20			10	T	50							5/
2N1208	2N5477		SNA	45	C	60	O	5.0	15	2.0	A						5.0		2.0	A	5/
2N1209	2N5477		SNA	45	C	45	O	5.0	20	2.0	A	3.0	T				5.0		2.0	A	
2N1210	2N4232		SNA	30	C	60	O		15	2.0	A	3.0	T				2.0		2.0	A	
2N1211	2N4233		SNA	30	C	80	V	5.0	15	2.0	A	3.0	T				2.0		2.0	A	
2N1212	2N5477		SNA	45	C	60	O	5.0	12	1.0	A	3.0	T				5.0		1.0	A	
2N1217			GNA	.075	A	20	O	0.25	40	500	u	4.8	B								
2N1218			GNA	20	C	45	R	3.0	30	1.0	A	0.21	E				1.0		1.0	A	3/
2N1219	2N3250		SPE	0.25	A	25	O	0.1	18	5.0	m	4.0	B	15				25	1000	H	5/
2N1220	2N3250		SPE	0.25	A	25	O	0.1	9.0	5.0	m	1.6	B	18				25	1000	H	5/
2N1221	2N3250		SPE	0.25	A	25	O	0.1				4.0	B	15				25	1000	H	5/
2N1222	2N3250		SPE	0.25	A	25	O	0.1				1.6	B	18				25	1000	H	5/

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C & I_B @	I_C	Unit	PACKAGE To-Case No.
2N1223	2N3250		SPE	0.25	A	40	0	0.1										25	1000	H	5/
2N1224			GPA	0.12	A	40	R	0.01		1.5	m										12/
2N1225			GPA	0.12	A	40	R	0.01		1.5	m										12/
2N1226			GPA	0.12	A	60	R	0.01		1.5	m										33/
2N1227	2N3611		GPA	50	C	20	0	3.0	50	0.5	A	0.15	E				.8		1.5	A	3/
2N1228	2N2904		SPE	0.4	A	15	0			10	m							10			5/
2N1229	2N2904		SPE	0.4	A	15	0			10	m							10			5/
2N1230	2N2904		SPE	0.4	A	35	0			10	m							10			5/
2N1231	2N2904		SPE	0.4	A	35	0			10	m							10			5/
2N1232	2N2905A		SPE	0.4	A	60	0			10	m							10			5/
2N1233	2N2905A		SPE	0.4	A	60	0			10	m							10			5/
2N1234	2N3495		SPE	0.4	A	110	0			10	m							10			5/
2N1235	2N5759		SNA	85	C	120	R	2.0	12	1.0	A	0.6	E				5.0		1.0	A	53/
D 2N1238	2N3467		SPE	1.0	A	15	0			10	m							10			
D 2N1239	2N3467		SPE	1.0	A	15	0			10	m							10			
D 2N1240	2N3467		SPE	1.0	A	35	0			10	m							10			
D 2N1241	2N3467		SPE	1.0	A	35	0			10	m							10			
D 2N1242	2N3763		SPE	1.0	A	60	0			10	m							10			
D 2N1243	2N3763		SPE	1.0	A	60	0			10	m						.2	10	10	m	
D 2N1244			SPA	1.0	A	110	0			10	m						.2		10	m	
D 2N1245			GPA	20	C	25	R	4.0	50	0.5	A										3/
D 2N1246			GPA	20	C	25	R	4.0	50	0.5	A										3/
2N1247	2N2222		SNA	0.03	A	6	0	.005	15	5.0	u										5/
2N1248	2N2222		SNA	0.03	A	6	0		15	20	u										
2N1249	2N2222		SNA	0.03	A	6	0	.005	20	30	u										5/
2N1250	2N4914		SNA	85	C	60	0	5.0	15	2.0	A						5.0		2.0	A	
2N1251			GNA	0.15	A	15	R	0.1		1.0	m	0.6	B				37		100	m	22/
2N1252	2N4237		SNA	0.6	A	20	R		15	150	m	40	T	45			1.5		150	m	5/
D 2N1252A	2N2537		SNA	0.8	A	30	0	1.0	15	150	m	40	T	45			1.5		150	m	5/
2N1253	2N4237		SNA	0.6	A	20	R		30	150	m	50	T	45			1.5		150	m	5/
D 2N1253A	2N2537		SNA	0.8	A	30	0	1.0	30	150	m	50	T	45			1.5		150	m	5/
2N1254	MM869B		SPS	.275	A	30	0	0.1	25	10	m	30	T	10		25/40	.3		10	m	5/
2N1255	MM869B		SPG	.275	A	30	0	0.1	40	10	m	50	T	10		25/60	.3		10	m	5/
2N1256			SPS	.275	A	40	0	0.1	25	10	m	30	T	10		25/40	.3		10	m	5/
2N1257			SPG	.275	A	40	0	0.1	40	10	m	50	T	10		25/60	.3		10	m	5/
2N1258	MM869B		SPG	.275	A	30	0	0.1	75	10	m	50	T	10		25/60	.6		10	m	5/
2N1259			SPG	.275	A	50	0	0.1	25	10	m	40	T	10		25/60	.3		10	m	5/
2N1260	2N5479		SNA	85	C	120	R	2.0	12	1.0	A	0.6	E				10		1.0	A	53/
2N1261	2N1531		GPA	34	C	45		3.5	20	2.0	A	0.2	T				.6		2.0	A	
2N1262	2N1531		GPA	34	C	45	0	3.5	30	2.0	A	0.2	T				.6		2.0	A	
2N1263	2N3617		GPA	34	C	45	0	3.5	45	2.0	A	0.2	T				.6		2.0	A	
D 2N1264	2N1191		GPA	0.05	A	20	B		15												
2N1265	2N1192		GPA	0.1	A	10	R	.1	50	1.0	m	0.8	B	25			.5		100	m	5/
2N1266	2N1191		GPA	0.08	A	10	0			1.0	m										22/
2N1267	2N2481		SNA	0.15	A	15	0	0.1	4.0	1.5	m										9/
2N1268	2N2481		SNA	0.15	A	15	0	0.1	7.0	1.5	m										9/
2N1269	2N2481		SNA	0.15	A	15	0	0.1	20	1.5	m										9/
2N1270	2N2481		SNA	0.15	A	15	0	0.1	4.0	1.5	m										9/
2N1271	2N2481		SNA	0.15	A	15	0	0.1	7.0	1.5	m										9/
2N1272	2N2481		SNA	0.15	A	15	0	0.1	20	1.5	m										9/
2N1273			GPA	0.25	A	15	R	0.2	27	50	m						1.0		100	m	5/
2N1274			GPA	0.25	A	25	R	0.2	27	50	m						1.0		100	m	5/
2N1275			SPA	0.25	A	80	0	0.05	9.0	1.0	m	0.08	B	110			.3		5.0	m	5/
2N1276	2N2501		SNA	0.15	A	30	0	0.25				12	B	5.0			1.0		5.0	m	5/
2N1277	2N2501		SNA	0.15	A	30	0	0.25				12	B	5.0			1.0		5.0	m	5/
2N1278	2N2501		SNA	0.15	A	30	0	0.25				12	B	5.0			1.0		5.0	m	5/
2N1279	2N2501		SNA	0.15	A	30	0	0.25				12	B	5.0			1.0		5.0	m	5/
2N1280			GPA	0.2	A	16	0	0.4	40	20	m	4.0	B	20							5/
2N1281			GPA	0.2	A	12	0	0.4	60	20	m	5.6	B	20							5/
2N1282			GPA	0.2	A	6	0	0.4	70	20	m	8.0	B	20							5/
2N1284			GPA	0.15	A	15	0		30	10	m	4.0	B				.2		10	m	
D 2N1285			GPA	0.24	A	40	V	0.01	30	1.5	m			3.0							33/
D 2N1287	2N651		GPA	0.3	C	25	R	0.3	40								.5		20	m	5/
D 2N1287A	2N652		GPA	0.3	C	25	R	0.3									.5		20	m	5/
D 2N1288			GNG	.075	A	10	R	0.05	50	10	m			10		100/400					39/
D 2N1289			GNA	.075	A	15	0	0.05	50	10	m	32	B	10			.3		10	m	39/
2N1291	2N1529		GPA	20	C	30	S	3.0	40	0.5	A						1.0		1.0	A	3/
2N1292			GNA	25	C	30	S	3.0	30	0.5	A										3/
2N1293	2N1531		GNA	20	C	60	S	3.0	30	05.	A						1.0		1.0	A	3/
2N1294			GNA	25	C	45	S	3.0	30	0.5	A						1.0		1.0	A	3/

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C/I_B	I_C & Unit	PACKAGE To-Case No. No.
2N1295	2N1532		GPA	200	C	80	S	3.0	40	0.5 A						1.0		1.0 A	3/
2N1296			GNA	25	C	60	S	3.0	30	0.5 A						1.0		1.0 A	3/
2N1297	2N1533		GPA	20	C	100	S	3.0	40	0.5 A						1.0		1.0 A	3/
2N1298			GNA	25	C	80	S	3.0	30	0.5 A						1.0		1.0 A	3/
2N1299			GNA	0.15	A	20	R	0.2	35	50 m	3.2	B				.17		15 m	5/
2N1300			GPA	0.15	A	12	O	0.1	30	10 m	25	T							
2N1301			GPA	.15	A	12	O	.1	30	10 m	35	T							5/
2N1302			GNA	.15	A	25	B	.3	20	10 m	2.4	B	20			.2		10 m	5/
2N1303	2N1192		GPA	.15	A	30	B	.3	20	10 m	2.4	B	20			.2		10 m	5/
2N1304			GNA	.15	A	25	B	.3	40	10 m	4.0	B	20			.2		10 m	5/
2N1305			GPA	.15	A	30	B	.3	40	10 m	4.0	B	20			.2		10 m	5/
2N1306			GNA	.15	A	25	B	.3	60	10 m	8.0	B	20			.2		10 m	5/
2N1307			GPA	.15	A	30	B	.3	60	10 m	8.0	B	20			.2		10 m	5/
2N1308			GNA	.15	A	25	B	.3	80	10 m	12	B	20			.2		10 m	5/
2N1309			GPA	.15	A	30	B	.3	80	10 m	12	B	20			.2		10 m	5/
2N1309A			GPA	.15	A	15	O	.3	80	10 m	12	B	20			.2		10 m	5/
2N1310			GNA	.12	A	90	B		20	5.0 m									9/
2N1311			SNA	.12	A	75	B		15	5.0 m									5/
2N1312			GNA	.12	A	50	B		20	20 m									5/
2N1313			GPA	.18	A	15	O	.4	40	m	.8	B				.28		.3 A	5/
2N1314	2N3611		GPA	125	C	40	R	3.5	20	1.0 A									3/
D 2N1315	2N3611		GPA	125	C	16		3.5	45	1.0 A									3/
2N1316			GPA	.2	A	15	O	.4	50		8.0	B	20						5/
2N1317			GPA	.2	A	12	O	.4	45		8.0	B	20						5/
2N1318			GPA	.2	A	6	O	.4	40		8.0	B	20						5/
2N1319			GPA	.12	A	20	V	.4	15	.4 A	3.0	T				.3		.4 A	5/
2N1320			GPA	20	C	30	S	3.0	40	.5 A						1.0		1.0 A	10/
2N1321			GNA	25	C	30	S	3.0	30	.5 A						1.0		1.0 A	10/
2N1322			GPA	20	C	60	S	3.0	40	.5 A						1.0		1.0 A	10/
2N1323			GNA	25	C	45	S	3.0	30	.5 A						1.0		1.0 A	10/
2N1324			GPA	20	C	80	S	3.0	40	.5 A						1.0		1.0 A	10/
2N1325			GNA	25	C	60	S	3.0	30	.5 A						1.0		1.0 A	10/10
2N1326			GPA	20	C	100	S	3.0	40	.5 A						1.0		1.0 A	10/
2N1327			GNA	25	C	80	S	3.0	30	.5 A						1.0		1.0 A	10/
2N1328			GPA	20	C	30	S	3.0	40	.5 A						1.0		1.0 A	13/
2N1329			GNA	25	C	30	S	3.0	30	.5 A						1.0		1.0 A	13/
2N1330			GNA	25	C	45	S	3.0	30	.5 A						1.0		1.0 A	13/
2N1331			GPA	20	C	80	S	3.0	40	.5 A						1.0		1.0 A	13/
2N1332			GNA	25	C	60	S	3.0	30	.5 A						1.0		1.0 A	13/
2N1333			GPA	20	C	100	S	3.0	40	.5 A						1.0		1.0 A	13/
2N1334			GNA	25	C	80	S	3.0	30	.5 A						1.0		1.0 A	13/
2N1335	2N3019		SNA	.8	A	45	O	.3	10	30 m	70	T	8.0						5/
2N1336	2N3019		SNA	.8	A	45	O	.3	10	30 m	70	T	10						5/
2N1337	2N3019		SNA	.8	A	45	O	.3	10	30 m	70	T	8.0						5/
2N1338	2N2193		SNA	.8	A	25	O	.3	10	30 m	70	T	10						5/
2N1339	2N3019		SNA	0.8	A	50	O	0.3	10	30 m	70	T	8.0						5/
2N1340	2N3019		SNA	0.8	A	50	O	0.3	10	30 m	70	T	8.0						
2N1341	2N3019		SNA	0.8	A	50	O		10	30 m	70	T							
2N1342	2N3019		SNA	0.8	A	65	O	0.3	10	30 m	70	T	8.0						5/
2N1343			GPA	0.15	A	16	O	0.4	15	50 m	3.2	B	20						5/
2N1344			GPA	0.15	A	10	O	0.4	60	20 m	5.6	B	20						5/
2N1345			GPA	0.15	A	8	O	0.4	30	0.4 A	8.0	B							5/
2N1346			GPA	0.15	A	10	O	0.4	40	35 m	8.0	B				.13		12 m	5/
2N1347			GPA	0.15	A	12	O	0.4	30	10 m	8.0	B				.2		10 m	5/
2N1352	2N651		GPA	0.15	A	20	O	0.2	40										5/
2N1353			GPA	0.2	A	10	O	0.2	25	10 m	1.76	B	35			.2		50 m	5/
2N1354			GPA	0.2	A	15	O	0.2	25	10 m	2.4	B				.2		50 m	5/
2N1355			GPA	0.2	A	20	O	0.2	30	10 m	4.0	B				.2		50 m	5/
2N1356			GPA	0.2	A	20	O	0.2	40	10 m	4.0	B	20			.2		50 m	5/
2N1357			GPA	0.2	A	15	O	0.2	40	10 m	8.0	B				.2		50 m	5/
★ 2N1358		1	GPA	90	C	40	O		40	1.2 A	0.08	B				.7		12 A	36/5
★ 2N1358A		1	GPG	150	C	60	O	15	40	1.2 A	0.08	B			30K/60K	.7		12 A	36/5
★ 2N1359		1	GPA	90	C	40	S	3.0	35	1.0 A	1.75	E				.1		2.0 A	3/
★ 2N1360		1	GPA	90	C	40	S	3.0	60	1.0 A	3.0	E	3.0			1.0		2.0 A	3/
D 2N1361			GPA	0.15	A	20	O		40	25 m	3.2	B							
D 2N1361A			GPA	0.2	A	20	O		40	257 m	3.2	B							
★ 2N1362		1	GPA	90	C	75	S	3.0	35	1.0 A	1.75	E				1.0		2.0 A	3/
2N1363		1	GPA	90	C	75	S	3.0	60	1.0 A	3.0	E				1.0		2.0 A	3/
★ 2N1364		1	GPA	90	C	100	S	3.0	35	1.0 A	1.75	E				1.0		2.0 A	3/
★ 2N1365		1	GPA	90	C	100	S	3.0	60	1.0 A	3.0	E				1.0		2.0 A	3/

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF dB Max / I_C / I_B	@ f & I_C	Unit	PACKAGE To-Case No. No.
2N1366			GNA	0.1	A	18	R	.025	20	1.0 m	2.0	B	18							5/
2N1367			GNA	0.1	A	18	R	.025	10	1.0 m	2.0	B	14							5/
2N1370			GPA	0.25	A	25	R	0.2	45	50 m						1.0		100	m	5/
2N1371			GPA	0.25	A	45	R	0.2	45	50 m						1.0		100	m	5/
2N1372			GPA	0.25	A	25	R	0.2	27	50 m						1.0		100	m	5/
2N1373			GPA	0.25	A	45	R	0.2	27	50 m						1.0		100	m	5/
2N1374			GPA	0.25	A	25	R	0.2	45	50 m						1.0		100	m	5/
2N1375			GPA	0.25	A	45	R	0.2	45	50 m						1.0		100	m	5/
2N1376			GPA	0.25	A	25	R	0.2	67	50 m						1.0		100	m	5/
2N1377			GPA	0.25	A	45	R	0.2	67	50 m						1.0		100	m	5/
2N1378			GPA	0.25	A	12	R	0.2	85	50 m						1.0		100	m	5/
2N1379			GPA	0.25	A	25	R	0.2	85	50 m						1.0		100	m	5/
2N1380			GPA	0.25	A	12	R	0.2	27	50 m						1.0		100	m	5/
2N1381			GPA	0.25	A	25	R	0.2	27	50 m						1.0		100	m	5/
2N1382			GPA	0.25	A	25	R	0.2	45	50 m						1.0		100	m	5/
2N1383			GPA	0.25	A	25	R	0.2	27	50 m						1.0		100	m	5/
D 2N1384			GPA	0.24	A	30	O	0.5	20	200 m	20	T								11/
2N1385			GPA	0.75	A	10	O	0.1	10	10 m	250	T	2.5							
2N1386	2N2222		SNA	0.3	A	25	O	0.05	30	10 m						.6		5.0	m	5/
2N1387	2N2222		SNA	0.3	A	30	O	0.05	20	10 m						.5		5.0	m	5/
2N1388	2N2222		SNE	0.3	A	25	O	0.05	15	10 m			10				30	1000	H	5/
2N1389	2N2222		SNF	0.3	A	50	O	0.05			24	T	6.0				15	1	M	5/
2N1390	2N2222		SNE	0.3	A	20	O	0.05	30	10 m	16	B					40	1000	H	5/
2N1391			GNA	0.15	A	18	O		35	1.0 m	2.4	T								
2N1392	THRU		OPT	Table 10																
2N1394			OPT	Table 10																
2N1395	2N2955		GPA	0.12	A	40	O	0.01	50	1.5 m	24	B	3.0							
2N1396	2N3323		GPA	0.12	A	40	O	0.01	50	1.5 m	24	B	3.0			15				
2N1397	2N3323		GPA	0.12	A	40	O	0.01	50	1.5 m	96	B	3.0			18				
D 2N1398			GPA	0.05	A	20	O	0.01	10	0.5 m	140	T	3.0			.75				
D 2N1399			GPA	0.05	A	20	O	0.01	3.5	0.5 m	140	T	3.0			.75		10	m	
D 2N1400			GPA	0.05	A	20	O	0.01	5.0	0.5 m	100	T	3.0			.75		10	m	
D 2N1401			GPA	0.05	A	20	O	0.01	5.0	0.5 m	120	T	3.0			.75		10	m	
D 2N1402			GPA	0.05	A	20	O	0.01	3.5	1.5 m	100	T	3.0			.75		10	m	
D 2N1403			GPA	0.25	A	12	O	0.1	25	7.0 m	200	T				.75		10	m	
2N1404			GPA	0.15	A	25	B	0.3			32	B	20			.15		12	m	5/
D 2N1404A			GPA	0.15	A	15	O		30	12 m	3.0	T				.15		12	m	
D 2N1405			GPF	.075	A	20	O	0.05	10	2.0 m	250	T	3.0				5.0	200	M	12/
D 2N1406			GPF	.075	A	20	O	0.05	10	2.0 m	250	T	3.0				8.0	200	M	12/
D 2N1407			GPF	.075	A	20	O	0.05	10	2.0 m	200	T	3.0				10	200	M	12/
★ 2N1408		1	GPA	0.15	A	50	S		10											5/31
2N1409	2N2537		SNA	0.6	A	25	O		15	150 m	200	T								
2N1409A	2N2537		SNA	0.8	A	25	O		15	150 m	200	T								
2N1410	2N2537		SNA	0.6	A	30	O		39	150 m	130	T								
2N1410A	2N2537		SNA	0.8	A	30	O		30	150 m	130	T								
2N1411	2N962		GPA	.025	A	5	S	0.05	20	50 m	25	T	6.0			.45		10	m	24/
★ 2N1412		1	GPA	70	C	65	O		25	5.0 A						.7		12	A	36/5
★ 2N1413		1	GPA	0.2	A	25	R	02	25	20 m	0.64	B	40							5/31
★ 2N1414		1	GPA	0.2	A	25	R	0.2	34	20 m	0.8	B	40							5/31
★ 2N1415		1	GPA	0.2	A	25	R	02	53	20 m	1.04	B	40							5/31
2N1416	2N1193		GPA	0.1	A	18	U													
2N1417			SNA	0.15	A	15	O	0.05												5/
2N1418			SNA	0.15	A	30	O	0.05												5/
D 2N1419	2N1164		GPA	87	C	40	O	25	40	25 A						.7		25	A	3/
2N1420	2N2219S		SNA	0.6	A	30	R	1.0	100	150 m	50	T	35			1.5		150	m	5/
2N1420A	2N2219		SNA	0.8	A	40	R	1.0	100	150 m	60	T	25			1.5		150	m	5/
D 2N1421	2N5477		SNA	30	C	60	S	3.0	20	1.0 A	10	T				3.0		1.0	A	
D 2N1422	2N5477		SNA	30	C	60	S	3.0	20	1.0 A	10	T				3.0		1.0	A	3/
D 2N1423	2N5477		SNA	60	C	60	S	3.0	20	2.0 A	10	T				5.0		2.0	A	3/
D 2N1424	2N5477		SNA	60	C	60	S	3.0	20	2.0 A	10	T				5.0		2.0	A	
D 2N1425			GPA	0.08	A			0.01			8.0	B	3.7							7/
D 2N1426			GPA	0.08	A			0.01			8.0	B	3.7							7/
2N1427	2N962		GPA	.025	A	6.0	S	0.05	20	50 m	50	T				.2		50	m	24/
D 2N1428	2N869		SPA	0.1	A	6.0	O	0.05	12	5.0 m	16	T	14			.1		5.0	m	1/
2N1429	2N869		SPA	0.1	A	6.0	O	0.05	12	5.0 m	16	T	14			.1		5.0	m	5/
2N1430			GPA	70	C	100	O		30	5.0 A	0 6	T				.4		10	A	
2N1431			GNA	0.18	A	15	R	0.1	75	35 m	0.75	E								
D 2N1432			GPA	0.1	A	45	R	0.01					3.0							
D 2N1433			GPA			50	O	3.5	20	2.0 A	0.1	E				1.5		2.0	A	10/
D 2N1434			GPA			50	O	3.5	45	2.0 A	0.225	E				1.0		2.0	A	10/

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min @ V_{CE}	NF dB Max @ I_C & I_B	f @ I_C	Unit	PACKAGE To-Case No.
D 2N1435			GPA			50	O	3.5	30	2.0	A	0.15	E						2.0	A	10/
2N1436			GPG	0.05	A	12	S	0.05	20	10	m			5.0	70/100				10	m	9/
2N1437			GPA	23	C	90	S	3.0	20	0.5	A	0.08	E						1.0	A	13/
2N1438			GPA	23	C	90	S	3.0	20	0.5	A	0.08	E						1.0	A	10/
2N1439	2N2907A		SPA	0.4	A	50	O	0.1		1.0	m	0.8	B						.25		5/
2N1440	2N2907A		SPA	0.4	A	50	O	0.1		1.0	m	0.8	B						.25		5/
2N1441	2N2907A		SPA	0.4	A	35	O	0.1		1.0	m	0.8	B						.25		5/
2N1442	2N2907A		SPA	0.4	A	30	O	0.1		1.0	m	0.8	B						.25		5/
2N1443	2N2907		SPA	0.4	A	15	O	0.1		1.0	m	0.8	B						.25		5/
D 2N1444	2N2410		SNG	0.5	A	20	O	0.25	20	.25	A				250/250				1.5		.25 A 29/
2N1445	2N5682		SNA	4.0	C	120	O	0.75	20	200	m	1.5	E						4.0		200 m 5/
2N1446	2N1191		GPA	0.2	A	25	O	0.4	16	20	m	0.64	B								5/
2N1447	2N1191		GPA	0.2	A	25	O	0.4	35	20	m	1.2	B								5/
2N1448	2N1192		GPA	0.2	A	25	O	0.4	50	20	m	1.6	B								5/
2N1449	2N1189		GPA	0.2	A	25	O	0.4	70	20	m	2.0	B								5/
2N1450	2N2955		GPA	0.12	A	20	C	0.1	20	10	m								.25		10 m
2N1451	2N464		GPA	0.2	A	20	O	0.4	20	20	m										5/
2N1452	2N1191		GPA	0.2	A	20	O	0.4	30	20	m										5/
D 2N1453			GPA			20	O	5.0	40	1.0	A	0.2	E						1.0		3.0 A 13/
D 2N1454			GPA			20	O	5.0	70	1.0	A	0.35	E						1.0		3.0 A 13/
D 2N1455			GPA			40	O	5.0	40	1.0	A	0.2	E						1.0		3.0 A 13/
D 2N1456			GPA			40	O	5.0	70	1.0	A	0.35	E						1.0		3.0 A 13/
D 2N1457			GPA			60	O	5.0	40	1.0	A	0.2	E						1.0		3.0 A 13/
D 2N1458			GPA			60	O	5.0	70	1.0	A	0.35	E						1.0		3.0 A 13/
D 2N1461			GPA			20	O	5.0	40	1.0	A	0.2	E						1.0		3.0 A 10/
D 2N1462			GPA			20	O	5.0	70	1.0	A	0.35	E						1.0		3.0 A 10/
D 2N1463			GPA			40	O	5.0	40	1.0	A	0.2	E						1.0		3.0 A 10/
D 2N1464			GPA			40	O	5.0	70	1.0	A	0.35	E						1.0		3.0 A 10/
2N1465			GPA	20	C	70	O	3.0	20	0.5	A	0.08	E						.75		1.0 A 13/
2N1466			GPA	20	C	70	O	3.0	20	0.5	A	0.08	E						.75		1.0 A 10/
2N1469	2N2906		SPE	0.25	A	35	U	0.1				1.6	B	7.0				25			5/
2N1470	2N5068		SNA	55	C	60	S	3.0	.15	1.0	A						3.0		1.0	A	3/
2N1471			GPA	0.2	A	15	R					2.4	B								
2N1472	2N834		SNA	0.15	A	25	O	0.1	20	10	m	75	T	3.5			.25		10	m	9/
2N1473			GNA	.167	A	20	O	0.4	25	400	m	3.2	B	20							5/
2N1474	2N2906A		SPE	0.25	A	60	U	0.1				0.8	B	7.0				25			5/
2N1474A	2N2906A		SPE	0.25	A	60	U	0.1				1.6	B	7.0				25			5/
2N1475	2N2906A		SPE	0.25	A	60	U	0.1				0.8	B	7.0				25			5/
2N1476	2N4928		SPE	0.25	A	100	U	0.1				0.8	B	7.0				25			5/
2N1477	2N4928		SPE	0.25	A	100	U	0.1				0.8	B	7.0				25			5/
2N1478	2N3427		GPA	0.25	A	20	S	0.4	40	100	m	2.4	B				.2		10	m	9/
2N1479	2N4237		SNA	5.0	C	60	V	1.5	20	200	m						1.4		200	m	5/
2N1480	2N4238		SNA	5.0	C	100	V	1.5	20	200	m						1.4		200	m	5/
2N1481	2N4237		SNA	5.0	C	60	V	1.5	35	200	m						1.4		200	m	5/
2N1482	2N4238		SNA	5.0	C	100	V	1.5	35	200	m						1.4		200	m	5/
2N1483	2N4231		SNA	25	C	60	V	3.0	20	750	m						2.0		750	m	8/
2N1484	2N4232		SNA	25	C	100	V	3.0	20	750	m						2.0		750	m	8/
2N1485	2N4231		SNA	25	C	60	V	3.0	35	750	m						.75		750	m	8/
2N1486	2N4232		SNA	25	C	100	V	3.0	35	750	m						.75		750	m	8/
2N1487	2N4913		SNA	75	C	60	V	6.0	15	200	m						3.0		1.5	A	3/
2N1488	2N4914		SNA	75	C	100	V	6.0	15	200	m						3.0		1.5	A	3/
2N1489	2N4913		SNA	75	C	60	V	6.0	25	1.5	A						1.0		1.5	A	3/
2N1490	2N4914		SNA	75	C	100	V	6.0	25	1.5	A						1.0		1.5	A	3/
2N1491	2N2218		SNH	3.0	C	30	V	0.1						5.0			13		70	M	39/
2N1492	2N2192		SNH	3.0	C	60	V	0.1						5.0			13		70	M	39/
2N1493	2N3500		SNH	3.0	C	100	V	0.1	4.0					5.0			10		70	M	39/
★ 2N1494			GPA	0.4	A	15	O	0.5	15	400	m	220	T	8.0			.5		200	m	31/
★ 2N1494A			GPA	0.4	A	15	O	0.5	25	200	m	220	T	8.0			.4		200	m	31/
★ 2N1495		1	GPA	0.3	A	25	O	0.5	25	200	m	150	T	6.5			.3		200	m	5/31
D 2N1495A			GPA	0.25	A	25	O	0.5	25	0.2	A	150	T	6.5			.3		.2	A	9/
★ 2N1496			GPA	0.5	A	25	O	0.5	25	200	m	150	T	6.5			.3		200	m	3/
2N1499			GPA	.025	A	15	S	0.05	20	10	m						.2		10	m	9/
2N1499A			GPA	.060	A	20	S	0.05	30	10	m	100	T	3.0			.2		10	m	9/
2N1499B			GPA	.075	A	20	O	0.1	40	10	m	150	T	3.0			.2		10	m	9/
2N1500			GPA	.060	A	12	S	0.05	20	10	m	120	T				.2		10	m	9/
2N1501	2N2144		GPA	27	C	40	O	3.5	25	2.0	A	0.2	T				.6		2.0	A	
2N1502	2N2143		GPA	27	C	40	O	3.5	25	2.0	A	0.2	T				.6		2.0	A	
D 2N1504			GPA	25	C	60	O	3.0	21	0.5	A	0.084	T				.75		1.0	A	
2N1505	2N2219A		SNA	0.8	A	20	O	0.5	7.0	0.1	A	70	T	20			2.0		.15	A	5/
2N1506	2N4237		SNP	0.8	A	20	O	0.5	10	0.1	A	140	T	12			10		70	M	5/

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF dB Max @ f	Unit	PACKAGE To-Case No. No.
														t_{on} ns Max	t_{off} ns Max		$V_{CE(sat)}$ Volts @ I_C & I_B Max		
	2N1506A		SNA	0.8	A	50	O		10	0.1 A	140	T					.6	.15 A	
	2N1507	2N2219	SNA	2.0	C	25	O	1.0	100	150 m	50	T	35				1.5	150 m	5/
D	2N1508	2N3019	SNG	1.0	A	55	O	1.0	20	600 m	50	T	50	130/320			3.6	600 m	39/
D	2N1509	2N3019	SNG	1.0	A	35	O	1.0	20	600 m	50	T	50	130/320			3.6	600 m	39/
	2N1510		GNA	.075	A	70	R	0.02	8.0	1.0 m							.8	4.0 m	
	2N1511	2N4913	SNA	75	C	60	V	6.0	4.0	6.0 A	0.3	T					7.2	6.0 A	36/
	2N1512	2N4914	SNA	75	C	100	V	6.0	4.0	6.0 A	0.3	T					6.0	6.0 A	36/
	2N1513	2N4913	SNA	75	C	60	V	6.0	7.0	6.0 A	0.3	T					6.0	6.0 A	36/
	2N1514	2N4914	SNA	75	C	100	V	6.0	7.0	6.0 A	0.3	T							36/
D	2N1516		GPA	.083	A			0.01	20	1.0 m									7/
★	2N1518		1 GPA	87.5	C	40		25	15	15 A							0.7	6.2 25 A	36/
	2N1519		1 GPA	50	C	60		25	15	15 A							.7	25 A	36/
	2N1520		1 GPA	50	C	40		35	17	15 A							.6	35 A	36/
	2N1521		1 GPA	50	C	60		35	17	15 A							.6	35 A	36/
	2N1522		1 GPA	50	C	40	B	50	25	15 A							.5	50 A	36/
	2N1523		1 GPA	50	C	60	B	50	25	15 A							.5	50 A	36/
	2N1524	2N3325	GPA	0.08	A			0.01					3.6						1/
D	2N1525	2N3325	GPA	0.08	A			0.01					3.6						40/
	2N1526	2N3325	GPA	0.08	A			0.01											1/
D	2N1527	2N3325	GPA	0.08	A			0.01											40/
D	2N1528	2N2218	SNH	0.15	A	25	S	0.02					8.0				13	6 M	5/
★	2N1529		1 GPA	90	C	30	S	10	20	3.0 A							1.5	3.0 A	
★	2N1529A		1 GPA	90	C	20	O	10	20	3.0 A	0.1	E					1.5	3.0 A	
★	2N1530		1 GPA	90	C	45	S	10	20	3.0 A							1.5	3.0 A	
★	2N1530A		1 GPA	90	C	30	O	10	20	3.0 A	0.1	E					1.5	3.0 A	
★	2N1531		1 GPA	90	C	60	S	10	20	3.0 A							1.5	3.0 A	
★	2N1531A		1 GPA	90	C	40	O	10	20	3.0 A	0.1	E					1.5	3.0 A	
★	2N1532		1 GPA	90	C	75	S	10	20	3.0 A							1.5	3.0 A	
★	2N1532A		1 GPA	90	C	50	O	10	20	3.0 A	0.1	E					1.5	3.0 A	
★	2N1533		1 GPA	90	C	90	S	10	20	3.0 A							1.5	3.0 A	
★	2N1534		1 GPA	90	C	30	S	10	35	3.0 A							1.2	3.0 A	
★	2N1534A		1 GPA	90	C	20	O	10	35	3.0 A	0.175	E					1.2	3.0 A	
★	2N1535		1 GPA	90	C	45	S	10	35	3.0 A							1.2	3.0 A	
★	2N1535A		1 GPA	90	C	30	O	10	35	3.0 A	0.175	E					1.2	3.0 A	
★	2N1536		1 GPA	90	C	60	S	10	35	3.0 A							1.2	3.0 A	
★	2N1536A		1 GPA	90	C	40	O	10	35	3.0 A	0.175	E					1.2	3.0 A	
★	2N1537		1 GPA	90	C	75	S	10	35	3.0 A							1.2	3.0 A	
★	2N1537A		1 GPA	90	C	50	O	10	35	3.0 A	0.175	E					1.2	3.0 A	
★	2N1538		1 GPA	90	C	90	S	10	35	3.0 A							1.2	3.0 A	
★	2N1539		1 GPA	90	C	30	S	5.0	50	3.0 A							.3	3.0 A	
★	2N1539A		1 GPA	90	C	20	O	5.0	50	3.0 A	0.15	E					.3	3.0 A	
★	2N1540		1 GPA	90	C	45	S	5.0	50	3.0 A							.3	3.0 A	
★	2N1540A		1 GPA	90	C	30	O	5.0	50	3.0 A	0.15	E					.3	3.0 A	
★	2N1541		1 GPA	90	C	60	S	5.0	50	3.0 A							.3	3.0 A	
★	2N1541A		1 GPA	90	C	40	O	5.0	50	3.0 A	0.15	E					.3	3.0 A	
★	2N1542		1 GPA	90	C	75	S	5.0	50	3.0 A							.3	3.0 A	
★	2N1542A		1 GPA	90	C	50	O	5.0	50	3.0 A	0.15	E					.3	3.0 A	
★	2N1543		1 GPA	90	C	90	S	5.0	50	3.0 A							.3	3.0 A	
★	2N1544		1 GPA	90	C	30	S	5.0	75	3.0 A	0.075	E					.2	3.0 A	3/
★	2N1544A		1 GPA	90	C	30	S	5.0	75	3.0 A	0.225	E					.2	3.0 A	3/
★	2N1545		1 GPA	90	C	45	S	5.0	75	3.0 A	0.075	E					.2	3.0 A	3/
★	2N1545A		1 GPA	90	C	45	S	5.0	75	3.0 A	0.225	E					.2	3.0 A	3/
★	2N1546		1 GPA	90	C	60	S	5.0	75	3.0 A	0.075	E					.2	3.0 A	3/
★	2N1546A		1 GPA	90	C	60	S	5.0	75	3.0 A	0.225	E					.2	3.0 A	3/
★	2N1547		1 GPA	90	C	75	S	5.0	75	3.0 A	0.075	E							3/
★	2N1547A		1 GPA	90	C	75	S	5.0	75	3.0 A	0.225	E							3/
★	2N1548		1 GPA	90	C	90	S	5.0	75	3.0 A	0.075	E					.2	3.0 A	3/
★	2N1549		1 GPA	90	C	30	S	15	10	10 A							1.0	10 A	
★	2N1549A		1 GPA	90	C	30	S	15	10	10 A	0.05	E					1.0	10 A	
★	2N1550		1 GPA	90	C	45	S	15	10	10 A							1.0	10 A	
★	2N1550A		1 GPA	90	C	45	S	15	10	10 A	0.05	E					1.0	10 A	
★	2N1551		1 GPA	90	C	60	S	15	10	10 A							1.0	10 A	
★	2N1551A		1 GPA	90	C	60	S	15	10	10 A	0.05	E					1.0	10 A	
★	2N1552		1 GPA	90	C	75	S	15	10	10 A							1.0	10 A	
★	2N1552A		1 GPA	90	C	75	S	15	10	10 A	0.05	E					1.0	10 A	
★	2N1553		1 GPA	90	C	30	S	15	30	10 A	0.03	E					.5	10 A	3/
★	2N1553A		1 GPA	90	C	20	O	15	30	10 A	0.09	E					.5	10 A	3/
★	2N1554		1 GPA	90	C	45	S	15	30	10 A	0.03	E					.5	10 A	3/
★	2N1554A		1 GPA	90	C	30	O	15	30	10 A	0.09	E					.5	10 A	3/
★	2N1555		1 GPA	90	C	60	S	15	30	10 A	0.03	E					.5	10 A	3/

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C @ I_B	I_C & I_C	Unit	PACKAGE To-Case No.
★ 2N1555A		1	GPA	90	C	40	O	15	30	10	A	0.09	E					.5		10	A	3/
★ 2N1556		1	GPA	90	C	75	S	15	30	10	A	0.03	E					.5		10	A	3/
★ 2N1556A		1	GPA	90	C	50	O	15	30	10	A	0.09	E					.5		10	A	3/
★ 2N1557		1	GPA	90	C	30	S	15	50	10	A	0.05	E					.4		10	A	3/
★ 2N1557A		1	GPA	90	C	20	O	15	50	10	A	0.15	E					.5		10	A	3/
★ 2N1558		1	GPA	90	C	45	S	15	50	10	A	0.05	E					.4		10	A	3/
★ 2N1558A		1	GPA	90	C	30	O	15	50	10	A	0.15	E					.5		10	A	3/
★ 2N1559		1	GPA	90	C	60	S	15	50	10	A	0.05	E					.4		10	A	3/
★ 2N1559A		1	GPA	90	C	40	O	15	50	10	A	0.15	E					.5		10	A	3/
★ 2N1560		1	GPA	90	C	75	S	15	50	10	A	0.05	E					.4		10	A	3/
★ 2N1560A		1	GPA	90	C	50	O	15	50	10	A	0.15	E					.5		10	A	3/
★ 2N1561			GPH	0.25	A	15	O	0.25						10				6.0		160	M	
★ 2N1562			GPH	0.25	A	15	O	0.25						10						160	M	5/
2N1564	2N2218		SNA	0.6	A	60	O	0.05	15	5.0	m							1.0		10	m	5/
2N1565	2N2218		SNA	0.6	A	60	O	0.05	30	5.0	m							1.0		10	m	5/
2N1566	2N2219		SNA	0.6	A	60	O	0.05	60	5.0	m							1.0		10	m	5/
2N1566A	2N2219		SNA	0.6	A	60	O	0.1	60	5.0	m	100	T					.95		10	m	5/
2N1572	2N3020		SNA	0.6	A	80	O	0.05	15	5.0	m							1.0		10	m	5/
2N1573	2N3020		SNA	0.6	A	80	O	0.05	30	5.0	m							1.0		10	m	5/
2N1574	2N3019		SNA	0.6	A	80	O	0.05	60	5.0	m							1.0		10	m	5/
D 2N1585			GNA	0.75	A	10	O	0.1	20	10	m			2.7								
2N1586	2N706A		SNE	.125	A	10	O	0.25	5.0	1.0	m	4.0	B					1.5	50	5.0	m	
2N1587	2N2501		SNE	.125	A	20	O	0.25	5.0	1.0	m	4.0	B					1.5	50	5.0	m	
2N1588	2N2221		SNE	.125	A	40	O	0.25	5.0	1.0	m	4.0	B					1.5	50	5.0	m	
2N1589	2N835		SNE	.125	A	10	O	0.25	20	1.0	m	4.0	B					1.5	50	5.0	m	
2N1590	2N2501		SNE	.125	A	20	O	0.25	20	1.0	m	4.0	B					1.5	50	5.0	m	
2N1591	2N2221		SNE	.125	A	40	O	0.25	20	1.0	m	4.0	B					1.5	50	5.0	m	
2N1592	2N2222		SNE	.125	A	10	O	0.25	40	1.0	m	4.0	B					1.5	50	5.0	m	
2N1593	2N2222		SNE	.125	A	20	O	0.25	40	1.0	m	4.0	B					1.5	50	5.0	m	
2N1594	2N2222		SNE	.125	A	40	O	0.25	40	1.0	m	4.0	B					1.5	50	5.0	m	
2N1595	THRU		THY	Table 6																		
2N1604			THY	Table 6																		
2N1605			GNA	0.15	A	24	O	0.1	40	20	m	3.2	B	20				.15		12	m	5/
2N1605A			GNA	0.2	A	40	U	0.1	40	20	m	3.2	B	20				.15		12	m	5/
D 2N1606	2N3546		SPA	0.1	A	10	S	0.05	6.0	15	m	7.2	T					.15		5.0	m	5/
D 2N1607	2N3546		SPA	0.1	A	10	S	0.05	6.0	15	m	10	T					.15		5.0	m	5/
D 2N1608	2N3546		SPA	0.1	A	10	S	0.05	6.0	15	m	25	T					.15		5.0	m	5/
D 2N1609	2N2140		GPA	4.5	C	60	O		30	100	m							1.0		500	m	37/
D 2N1610	2N2145		GPA	4.5	C	60	O		50	100	m							.6		500	m	37/
D 2N1611	2N2138		GPA	4.5	C	40	O		30	100	m							1.0		500	m	37/
D 2N1612	2N2143		GPA	4.5	C	40	O		50	100	m							.6		500	m	37/
★ 2N1613			SNE	0.8	A	50	R		40	150	m	60	T						8.0	1000	H	5/31
2N1613A	2N2218		SNA	1.0	A	50	R		40	150	m	60	T					1.0		150	m	
2N1613B	2N3019		SNE	1.0	A	55	R		40	150	m	60	T	10					12	1000	H	
2N1614	2N1924		GPE	0.24	A	40	R	0.3	18	20	m	0.4	B	60				.13	20	20	m	
2N1615	2N3500		SNA	0055	A	100	O		25	5.0	m	2.0	T					5.0		50	m	
2N1616	2N5477		SNA	60	C	60	O	5.0	15	2.0	A	3.0	T					2.0		2.0	A	
2N1616A	2N5477		SNA	85	C	60	O	7.5	20	2.0	A	3.0	T					1.0		2.0	A	
2N1617	2N5477		SNA	60	C	80	V	5.0	15	2.0	A	3.0	T					2.0		2.0	A	
2N1617A	2N5477		SNA	85	C	70	O	7.5	20	2.0	A	3.0	T					1.0		2.0	A	
2N1618	2N5479		SNA	60	C	100	V	5.0	15	2.0	A	3.0	T					2.0		2.0	A	
2N1618A	2N5477		SNA	85	C	80	O	7.5	20	2.0	A	3.0	T					1.0		2.00	A	
2N1620	2N5458		SNA	60	C	100	V	5.0	15	2.0	A	3.0	T									
D 2N1622			GNA	0.12	A	90	S		40	5.0	m											5/
2N1623	2N2906		SPA	0.25	A	20	O	0.05	9.0	1.0	m	0.08	B					.3		5.0	m	9/
2N1624			GNA	0.15	A	20	R		60	30	m	4.0	B									40/
D 2N1631	2N3325		GPA	0.08	A			0.01														1/
2N1632	2N3325		GPA	0.08	A			0.01														40/
D 2N1633			GPA	0.08	A			0.01														1/
D 2N1634			GPA	0.08	A			0.01														40/
D 2N1635			GPA	0.08	A			0.01														1/
D 2N1636			GPA	0.08	A																	1/
2N1637	2N3325		GPA	0.08	A			0.01														1/
2N1638	2N3325		GPA	0.08	A			0.01														1/
2N1639	2N3325		GPA	0.08	A			0.01														1/
2N1640	2N5230		SPC	0.25	A	20	U	0.05	6.0	100	u											1/
2N1641	2N5230		SPC	0.25	A	10	U	0.05	10	100	u											5/
2N1642			SPC	0.25	A	6.0	U	0.05	15	100	u											5/
2N1643			SPA	0.25	A	25	U	0.05	10	100	u											5/
2N1644	2N2218		SNA	2.0	C	40	R		40	150	m	50	T					1.5		150	m	

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF dB Max @ $\frac{I_C}{I_B}$	@ f & I_C	Unit	PACKAGE To-Case No.
D 2N1645			GPP	1.0	A	20	O	0.3	20	0.2	A	450	T	13			8.0		100	M	38/
D 2N1646			GNA	0.15	A	12	S	0.05	20	10	m			5.0							
2N1647	2N5477		SNA	40	C	80	V	3.0	15	0.5	A	3.0	T				3.0		1.0	A	
2N1648	2N5479		SNA	40	C	80	O	3.0	15	0.5	A	2.0	T				3.0		1.0	A	
2N1649	2N5477		SNA	40	C	80	V	3.0	30	0.5	A	3.0	T				3.0		1.0	A	
2N1650	2N5477		SNA	40	C	80	O	3.0	30	0.5	A	2.0	T				3.0		1.0	A	
★ 2N1651		1	GPA	100	C	60	S	25	35	10	A						.65		25	A	41/161
★ 2N1652		1	GPA	100	C	100	S	25	35	10	A						.65		25	A	41/161
★ 2N1653		1	GPA	100	C	120	S	25	35	10	A						.65		25	A	41/161
2N1654	MM3006		SNA	0.25	A	80	O	0.05	20	1.0	m	0.08	B				.3		5.0	m	5/
2N1655	MM3007		SNA	0.25	A	100	O	0.05	10	1.0	m	0.08	B				.3		5.0	m	5/
2N1656	MM3007		SNA	0.25	A	100	O	0.05	20	1.0	m	0.08	B				.3		5.0	m	5/
D 2N1657	MM3005		SNA		C	60	S	2.0	7.5	.85	A	1.6	B				4.5		.85	A	
D 2N1660			SNA	85	C	60	R	2.0	45	1.0	A	25	T				4.0		1.0	A	
D 2N1661			SNA	85	C	80	R	2.0	45	1.0	A	25	T				4.0		1.0	A	
D 2N1662			SNA	85	C	100	R	2.0	45	1.0	A	25	T				4.0		1.0	A	
D 2N1663			SNA	0.15	A	15	O	0.1	30	20	m	100	T				.25		10	m	9/
D 2N1664			GPE	0.2	A	40	R	0.2	45	10	m	0.08	B				.5	22	.1	A	5/
D 2N1665			GPA	0.15	A	12	O	0.05	5.0	10	m	300	T	3.0							5/
2N1666	2N3616		GPA	30	C	60	V	8.0	15	6.0	A	0.03	E				.5		6.0	A	3/
2N1667	2N3618		GPG	30	C	32	O	6.0	35	6.0	A	0.07	E		30K/75K		.5		6.0	A	3/
2N1668	2N3616		GPG	30	C	32	O	6.0	20	6.0	A	0.04	E		30K/75K		.5		6.0	A	3/
2N1669	2N3616		GPG	30	C	32	O	6.0	20	6.0	A	0.04	E		30K/75K		.5		6.0	A	3/
2N1670			GPA	0.12	A				15	10	m										
2N1671	THRU		UJT	Table 8																	
2N1671C			UJT	Table 8																	
2N1672			GNA	0.12	A	40	X		20	1.0	m	1.6	B								5/
2N1672A			GNA	0.12	A	40	X		20	1.0	m	1.6	B								5/
D 2N1673			GPA	0.08	A			0.01													5/
2N1674			SNA	0.2	A	45	O	.025				20	T				1.5		5.0	m	5/
D 2N1675			SNA	50	C	100	S	10	25	1.0	A	120	T				2.5		5.0	A	32/
2N1676			SPC	0.1	A	4	U	0.05				16	T				.1		5.0	m	5/
2N1677			SPC	0.1	A	4	U	0.05				16	T				.1		5.0	m	5/
2N1678			GPA	0.12	A	60	S		25	20	m	20	B								9/
D 2N1679	2N5335		SNG	1.0	A	55	O	1.0	40	600	m	50	T	50	130/320		3.6		600	m	39/
D 2N1680	2N5334		SNG	1.0	A	35	O	1.0	40	600	m	50	T	50	130/320		3.6		600	m	39/
2N1681			GPA	0.18	C	15	O	0.2	30	10	m	4.0	B	20			.1		10	m	5/
2N1682			SNA	0.5	A	20	R		20	10	m	200	T	6.0			.6		10	m	5/
2N1683			GPA	0.15	A	12	O	0.1	50	40	m	50	T				12		1.0	A	5/
D 2N1684			GPA	0.1	A	25	X	0.1				3.2	B	20			.15		12	m	
D 2N1685			GPA	0.1	A	20	R	0.2	60	30	m	6.4	B	20							
2N1686	THRU		THY	Table 6																	
2N1689			THY	Table 6																	
2N1690	2N4912		SNA	40	C	80	O	0.5	20	500	m	1.8	E				7.5		500	m	
2N1691	2N5050		SNA	40	C	120	O	0.5	20	500	m	1.8	E								
★ 2N1692			GPH	0.35	A	15	O	0.25						10			6.0		160	M	102/24
★ 2N1693			GPH	0.35	A	25	S	0.25						10					160	M	102/24
2N1694			GNA	.075	A	20	O	.025	17	1.0	m	2.4	B	6.0							
D 2N1699			GPA	0.1	A	40	X	0.01	20	1.5	m			3.0							
2N1700	2N4237		SNA	5.0	C	60	V	1.0	20	100	m	0.32	B								5/
2N1701	2N4910		SNA	25	C	60	V	2.5	20	300	m	0.28	B				20		5.0	A	8/
2N1702	2N5067		SNA	75	C	60	V	5.0	15	800	m	0.24	B				20		5.0	A	
2N1703	2N5067		SNA	75	C	60	V	5.0	15	800	m	0.24	B								36/
2N1704	2N2218		SNA	0.5	A	45	B	0.05	50	1.0	m	4.0	B	15			1.0		10	m	5/
★ 2N1705		1	CPA	0.2	A	12	R	0.4													5/31
★ 2N1706			GPA	0.2	A	18	R	0.4	60	20	m										5/31
★ 2N1707		1	GPA	0.2	A	25	R	0.4	30	10	m										5/31
2N1708	2N2319	1	SNA	1.0	C	12	O	0.2	20	10	m	200	T	6.0			.22		10	m	46/
2N1708A			SNG	0.3	A	20	R	0.5	30	10	m	300	T	6.0	40/75		.22		10	m	46/
2N1709			SNP	15	C	30	O	2.0	7.5	.35	A	175	T	40			10		30	M	8/
2N1710			SNP	15	C	30	O	2.0	4.0	.35	A	140	T	40			8.0		30	M	8/
2N1711			SNE	0.8	A	50	R	1.0	100	150	m	70	T	25				8.0	1000	H	5/
2N1711A	2N2219A		SNA	1.0	A	50	R		100	150	m	70	T				1.0		150	m	
2N1711B	2N2219A		SNE	1.0	A	55	R	2.0	100	150	m	70	T	10				8.0	1000	H	5/
D 2N1713			GPA	0.08	A	12	O	0.01	20	1.5	m	80	B	3.1							7/
2N1714	2N4237		SNA	20	C	60	O	0.75	20	200	m	16	T	50			2.0		200	m	5/
2N1715	2N5681		SNA	20	C	100	O	0.75	20	200	m	16	T	50			2.0		200	m	5/
2N1716	2N4237		SNA	20	C	60	O	0.75	40	200	m	16	T	50			2.0		200	m	5/
2N1717	2N5681		SNA	20	C	100	O	0.75	40	200	m	16	T	50			2.0		200	m	5/
2N1718	2N3766		SNA	20	C	60	O	0.75	20	200	m	16	T	50			2.0		200	m	

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	t_{on} ns Max	ΔV_{BE} mV Max	t_{off} ns Max	Gp dB Min	NF dB Max	$V_{CE(sat)}$ Volts @ I_C / I_B	& I_C	f	Unit	PACKAGE To-Case No.	No.
2N1719	2N3767		SNA	20	C	100	O	0.75	20	200 m		16	T	50							2.0		200 m			
2N1720	2N3766		SNA	20	C	60	O	0.75	40	200 m		16	T	50							2.0		200 m			
2N1721	2N3767		SNA	20	C	100	O	0.75	40	200 m		16	T	50							2.0		200 m			
2N1722	2N5427		SNA	50	C	80	O	5.0	20	2.0	A	10	T	550							1.0		2.0	A		
2N1722A	2N1724		SNA	50	C	120	O		30	2.0	A	10	T								.6		2.0	A		
2N1723	2N1724		SNA	50	C	80	O	5.0	50	2.0	A	10	T								1.0		2.0	A		
★ 2N1724		1	SNA	50	C	80	O	5.0	20	2.0	A	10	T	550							1.0		2.0	A		53/
2N1724A	2N1724A		SNA	50	C	120	O		30	2.0	A	10	T								.6		2.0	A		61/9
★ 2N1725		1	SNA	50	C	80	O	5.0	50	2.0	A	10	T	550							1.0		2.0	A		61/9
2N1726	2N3323		GPA	0.06	A	20	S	0.05	50	1.0	m	100	T													9/
2N1727	2N3324		GPA	0.06	A	20	S	0.05	20	1.0	m	100	T													9/
2N1728	2N3324		GPA	0.06	A	20	S	0.05	20	1.0	m	100	T													9/
2N1729			GPG	0.15	A	15	X	0.3	30	100	m			20	300/600						.35		200 m			5/
2N1730			GNG	0.15	A	15	X	0.3	30	100	m			20	300/600						.35		200 m			5/
2N1731			GPA	0.15	A	30	X	0.3	40	10	m	40	B	20												5/
2N1732			GNA	0.15	A	30	X	0.3	40	10	m	4.0	B	20												5/
★ 2N1742			GPE	0.06	A	20	S	0.05	10	2.0	m			1.5						5.5	1000	H				9/
2N1743	2N3284		GPE	0.06	A	20	S	0.05	10	2.0	m			1.5						12	1000	H				9/
2N1744	2N3284		GPA	0.06	A	20	S	0.05	10	2.0	m			1.5												9/
2N1745	2N3285		GPA	0.06	A	20	S	0.05	10	2.0	m															9/
2N1746	2N3323		GPA	0.06	A	20	S	0.05	10	1.0	m	100	T	3.0												9/
2N1747	2N3324		GPA	0.06	A	20	S	0.05	10	1.0	m															9/
2N1748	2N3324		GPA	0.06	A	25	S	0.05				80	T													9/
2N1748A	2N3323		GPA	0.06	A	25	S	0.05				100	T													9/
2N1749	2N3323		GPA	0.75	A	40	S	0.01				80	T	2.5												9/
D 2N1750			GPA	.015	A	6	S	.005	18	500	u	30	M	6.0												24/
2N1751		1	GPA			80	S	25	30	20	A	1.2	B								.5		20 A			3/
2N1752	2N3325		GPA	0.06	A	12	S	0.05				50	M	3.0												9/
D 2N1753			GPA	0.03	A	18	O	0.05	50	100	u			2.5												1/
2N1754			GPA	0.05	A	13	S	0.1	20	10	m										.2		10 m			9/
2N1755	2N2137		GPA	28	C	35	S	3.0	30	0.5	A	0.45	E								.7		3.0 A			
2N1756	2N2138		GPA	28	C	50	S	3.0	30	0.5	A										.7		3.0 A			
2N1757	2N2139		GPA	28	C	65	S	3.0	30	0.5	A	0.45	E								.6		3.0 A			
2N1758	2N2140		GPA	28	C	75	S	3.0	30	0.5	A	0.45	E								.7		3.0 A			
2N1759	2N2142		GPA	28	C	35	S	3.0	60	0.5	A	0.9	E								.5		3.0 A			
2N1760	2N2143		GPA	28	C	50	S	3.0	60	0.5	A	0.9	E								.5		3.0 A			
2N1761	2N2144		GPA	28	C	65	S	3.0	60	0.5	A	0.9	E								.5		3.0 A			
2N1762	2N2145		GPA	28	C	75	S	3.0	60	0.5	A	0.9	E								.5		3.0 A			
D 2N1763			SNG	0.3	A	25	O	0.05							32/58						1.5		10 m			51/
D 2N1764	2N2369A		SNG	0.3	A	15	O	0.05							32/58						1.5		10 m			51/
2N1768	2N4231		SNA	40	C	40	O	3.0	35	750	m	0.48	B								.75		750 m			
2N1769	2N4233		SNA	40	C	55	O	3.0	35	750	m	0.48	B								.75		750 m			
D 2N1770	THRU		THY	Table 6																						
D 2N1778A			THY	Table 6																						
D 2N1779			GPA	0.1	A	20	R		20	30	m															
D 2N1780	2N3798		SPA	0.1	A	25	R		30	30	m	3.2	B													
D 2N1781			GPA	0.1	A	25	X		40	20	m	3.2	B								.15		12 m			
D 2N1782			GPA	0.1	A	20	X		30	10	m	4.0	B								.20		50 m			
D 2N1783			GPA	0.1	A	15	O		20	10	m	4.0	B								.32		200 m			
D 2N1784			GPA	0.1	A	20	O		20	10	m	8.0	B								.32		200 m			
2N1785	2N3324		GPA	.045	A	10	S	0.05	40	1.0	m	50	T	3.0												9/
2N1786	2N3323		GPA	.045	A	10	S	0.05	15	1.0	m	50	T	3.0												9/
2N1787	2N3324		GPA	.045	A	15	S	0.05	20	1.0	m	50	T	3.0												9/
2N1788	2N3324		GPA	0.05	A	35	S	0.05	40	1.0	m	100	T	2.5												9/
2N1789	2N3325		GPA	0.06	A	35	S	0.05	15	1.0	m	100	T	2.5												9/
2N1790	2N3323		GPA	0.06	A	35	S	0.05	25	1.0	m	100	T	2.5												9/
2N1792	THRU		THY	Table 6																						
2N1807			THY	Table 6																						
2N1808			GNA	0.15	A	25	B	0.3				3.2	B	20							.15		12 m			5/
2N1809	2N5885		SNA	250	C	50	V		10	10	A										1.5		10 A			
2N1810	2N5629		SNA	250	C	100	V		10	10	A										1.5		10 A			
2N1811	2N5629		SNA	250	C	150	V		10	10	A										1.5		10 A			
2N1812			SNA	250	C	200	V		10	10	A										1.5		10 A			
2N1813			SNA	250	C	250	V		10	10	A										1.5		10 A			
2N1814			SNA	250	C	300	V		10	10	A										1.5		10 A			
2N1816	2N5302		SNA	250	C	50	V		10	15	A										1.5		15 A			
2N1817	2N5302		SNA	250	C	100	V		10	15	A										1.5		15 A			
2N1818			SNA	250	C	150	V		10	15	A										1.5		15 A			
2N1819			SNA	250	C	200	V		10	15	A															
2N1820			SNG	250	C	250	V	30	10	15	A				20K/25K						1.5		15 A			

	TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF @ f dB Max		Unit	PACKAGE To- No.	Case No.
																t_{on} ns Max	t_{off} ns Max	$V_{CE(sat)}$ Volts Max	@ $\frac{I_C}{I_B}$	& I_C			
D	2N1821			SNG	250	C	300	V	30	10	15	A					20K/25K	1.5		15	A		
	2N1823	2N5685		SNA	250	C	50	V		10	20	A						1.5		20	A		
	2N1824	2N5686		SNA	250	C	100	V		10	20	A						1.5		20	A		
	2N1825			SNA	250	C	150	V		10	20	A						1.5		20	A		
	2N1826			SNA	250	C	200	V		10	20	A						1.5		20	A		
	2N1827			SNG	250	C	250	V	30	10	20	A					20K/25K	1.5		20	A		
D	2N1828			SNG	250	C	300	V	30	10	20	A					20K/25K	1.5		20	A		
	2N1830	2N5685		SNA	250	C	50	V		10	25	A						1.5		25	A		
	2N1831	2N5686		SNA	250	C	100	V		10	25	A						1.5		25	A		
	2N1832			SNA	250	C	150	V		10	25	A						1.5		25	A		
	2N1833			SNA	250	C	200	V		10	25	A						1.5		25	A		
D	2N1834			SNG	250	C	250	V	30	10	25	A					20K/25K	1.5		25	A		
D	2N1835			SNG	250	C	300	V	30	10	25	A					20K/25K	1.5		25	A		
	2N1837	2N2218		SNG	0.8	A	30	O	0.5	40	150	m	140	T	18	200/500		.8		150	m	5/	
	2N1837A	2N2218		SNG	0.8	A	30	O	0.5	40	.15	A	140	T	18	200/500		.8		.15	A	5/	
D	2N1837B	2N2218		SNA	0.8	A	30	O		40	.15	A	140	T				.8		.15	A		
	2N1838	2N2218		SNG	0.6	A	20	O	0.5	40	0.1	A	90	T	27	200/800		1.4		.1	A	5/	
	2N1839	2N2218		SNG	0.6	A	20	O	0.5	12	0.1	A	90	T	27	200/600		1.4		.15	A	5/	
	2N1840	2N2218		SNA	0.6	A	15	O	0.5	10	.15	A	90	T	27			1.4		.15	A	5/	
D	2N1841	2N5334		SNA	2.0	A	50	O	2.0	15	15	m	900	E	40			1.0		1.0	A		
	2N1842	THRU		THY	Table 6																		
	2N1850B			THY	Table 6																		
	2N1853			GPG	0.15	A	6	O	0.1	30	6.0	m					800/900	.2		6.0	m	5/	
	2N1854			GPG	0.15	A	6	O	0.1	40	20	m	40	T	12	60/80		.2		20	m	5/	
	2N1864	2N3324		GPG	0.06	A	20	S		10	1.0	m	50	T	3.0	/80						9/	
	2N1865	2N3325		GPA	0.06	A	20	S	0.05	25	1.0	m			3.0							9/	
	2N1866	2N3323		GPA	0.06	A	35	S	0.05	25	1.0	m			2.5							9/	
	2N1867	2N3324		GPA	0.06	A	35	S	0.05	10	1.0	m										9/	
	2N1868	2N3325		GPA	0.06	A	20	S	0.05	10	2.0	m			1.5							9/	
	2N1869	THRU		THY	Table 6																		
	2N1885			THY	Table 6																		
	2N1886	2N4911		SNA	20	C	60	O	3.0	20	0.5	A	2.0	T				5.0		1.0	A		
	2N1889	2N3498		SNA	0.8	A	80	R		40	150	m	50	T	15			5.0		150	m	5/	
★	2N1890	2N3499		SNA	0.8	A	80	R		100	150	m	60	T	15			5.0		150	m	5/	
	2N1891			GNA	0.15	A	15	O	0.3	25	100	m	4.0	B	20			.15		100	m	5/	
	2N1892			GPA	0.15	A	15	O	0.3	40	10	m	4.0	B	20			.2		10	m	5/	
★	2N1893			SNA	0.8	A	100	R	0.5	40	150	m	50	T	15			5.0		150	m	5/31	
	2N1893A	2N3498		SNA	0.8	A	80	O	0.5	40	.15	A	100	T	8.0			2.0		.15	A	5/	
D	2N1894	2N4238		SNA			60	R	2.0	12	1.0	A						5.0		1.0	A		
D	2N1895	2N4239		SNA			80	R	2.0	12	1.0	A						10		1.0	A		
D	2N1896	2N5336		SNA			60	R	2.0	45	1.0	A	25	T				4.0		1.0	A		
D	2N1897	2N5336		SNA			80	R	2.0	45	1.0	A	25	T				4.0		1.0	A		
D	2N1898	2N5338		SNA			100	R	2.0	45	1.0	A	25	T				4.0		1.0	A		
	2N1899			SNG	125	C	50	O	10	10	10	A	50	T	1000	1000/3500		1.0		10	A		
	2N1900			SNG	125	C	50	O	10	8.0	10	A	50	T	1000	500/3500		2.0		10	A		
	2N1901			SNG	125	C	50	O	10	20	10	A	50	T	1000	1000/3500		1.0		10	A		
	2N1902			SNA	125	C	50	O	10	10	10	A	50	T				1.0		10	A		
	2N1903			SNA	125	C	50	O	10	8.0	10	A	50	T	1000			2.0		10	A		
	2N1904			SNG	125	C	50	O	10	20	10	A	50	T	1000	500/3500		1.0		10	A	3/	
	2N1905	2N2832		GPA	30	C	50	O	6.0	50	1.0	A						1.0		5.0	A	3/	
	2N1906	2N2832		GPA	30	C	60	O	6.0	75	1.0	A						5.0		5.0	A	3/	
	2N1907			GPA	60	C	40	O	20				10	T				1.0		15	A	3/	
D	2N1907A			GPA	60	C	40	O	20	30	10	A						.7		10	A	3/	
	2N1908			GPA	60	C	50	O					10	T				1.0		15	A		
D	2N1908A			GPA	60	C	50	O	20	30	10	A						.7		10	A	3/	
	2N1909	THRU		THY	Table 6																		
	2N1916			THY	Table 6																		
	2N1917			SPC	0.25	A	8	O	0.05				16	T	14				25	1000	H	5/	
	2N1918			SPC	0.25	A	8	O	0.05				10	T	14				25	1000	H	5/	
	2N1919			SPC	0.25	A	18	O	0.05				0.08	B	14				25	1000	H	5/	
	2N1920			SPC	0.25	A	18	O	0.05				0.08	B	14				25	1000	H	5/	
	2N1921			SPC	0.25	A	50	O	0.05				0.08	B	14				25	1000	H	5/	
	2N1922			SPC	0.25	A	80	O	0.05				0.08	B	14				25	1000	H	5/	
D	2N1923	2N3498		SNA	0.75	A	85	O	0.06	4.0					15			30		10	K	11/	
★	2N1924		1	GPE	.225	A	40	R	0.5	34	20	m	0.08	B	30				25	1000	H	5/31	
★	2N1925		1	GPA	.225	A	40	R	0.5	53	20	m	1.04	B	30			.11		20	m	5/31	
★	2N1926		1	GPA	.225	A	40	R	0.5	72	20	m	1.2	B	30			.11		20	m	5/31	
	2N1929	THRU		THY	Table 6																		
	2N1935			THY	Table 6																		
	2N1936	MJ7000		SNA	150	C	60	O		7.0	10	A	4.0	T				.75		10	A		

	TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF dB Max @ f		Unit	PACKAGE To- No.	Case No.
													t_{on} ns Max				t_{off} ns Max		$V_{CE(sat)}$ Volts Max @	$\frac{I_C}{I_B}$ &	I_C			
	2N1937	MJ7000		SNA	150	C	80	O		7.0	10	A	4.0	T					.75		10	A		
D	2N1940			GPP	3.5	C	15	O	0.25	5.0	40	m			12				10		70	M		
D	2N1941	2N2219A		SNA	0.6	A	30	R	1.0	30	10	m	60	T	35				1.5		5.0	m		
D	2N1942			GPA	0.2	A	10	O	0.5	20	0.2	A	4.0	B	20								5/	
	2N1943	2N3020		SNA	0.8	A	60	O		30	200	m							5.0		200	m	5/	
	2N1944	2N2219A		SNA	0.6	A	20	R	1.0	150	1.0	m	60	T	40								5/	
	2N1945	2N2219A		SNA	0.6	A	30	R	1.0	150	1.0	m	60	T	40								5/	
	2N1946	2N2219A		SNA	0.6	A	40	R	1.0	150	1.0	m	60	T	40								5/	
	2N1947			SNA	0.6	A	20	R	1.0	500	0.1	A	60	T	40								5/	
	2N1948			SNA	0.6	A	30	R	1.0	500	0.1	A	60	T	40								5/	
	2N1949			SNA	0.6	A	40	R	1.0	500	0.1	A	60	T	40								5/	
	2N1950			SNA	0.6	A	20	R	1.0	250	0.1	A	60	T	40								5/	
	2N1951			SNA	0.6	A	30	R	1.0	250	0.1	A	60	T	40								5/	
	2N1952			SNA	0.6	A	40	R	1.0	250	0.1	A	60	T	40								5/	
	2N1953	2N2218		SNA	0.6	A	20	S	1.0	15	10	m	40	T	35								5/	
	2N1954	2N651		GPG	0.2	A	20	O	0.2	30	20	m				2750/6250			.3		20	m	5/	
	2N1955	2N1190		GPG	0.2	A	18	O	0.2	50	20	m				2750/6250			.17		20	m	5/	
	2N1956	2N651		GPG	0.2	A	16	O	0.2	30	20	m				2750/6250			.17		20	m	5/	
	2N1957	2N1187		GPG	0.2	A	14	O	0.2	30	20	m				2750/6250			.17		20	m	5/	
	2N1958	2N2537		SNA	0.6	A	40	R	0.5	20	150	m	100	T	18				.45		150	m	5/	
	2N1958A	2N2537		SNA	0.6	A	40	R	1.0	20	150	m	100	T	14				.45		150	m	5/	
	2N1959	2N5859		SNA	0.6	A	40	R	0.5	40	150	m			18				.45		150	m		
	2N1959A	2N2537		SNA	0.6	A	40	R	1.0	40	150	m	100	T	14				.45		150	m	5/	
D	2N1960			GPA	0.15	A	15		0.2	25	10	m							.16		10	m		
D	2N1961			GPA	0.15	A	12	S	0.2	20	10	m							.20		10	m		
D	2N1962	2N2537		SNA	0.4	A	20	R	0.2	20	10	m	200	T	3.0				.25		10	m		
D	2N1963	2N2537		SNA	0.4	A	15	R	0.2	25	10	m	200	T	3.5				.16		10	m		
D	2N1964	2N2539		SNA	0.4	A	40	R	0.4	20	150	m	100	T	18				.45		150	m		
D	2N1965	2N2539		SNA	0.4	A	40	R	0.5	40	.15	A	100	T	18				.45		.15	A		
	2N1966	THRU		THY	Table 6																			
	2N1968			THY	Table 6																			
	2N1969			GPA	0.15	A	15	O	0.4	50	200	u	8.0	B	20								5/	
★	2N1970		1	GPA	150	C	50	B	.15	17	5.0	A	0.085	E					1.0		12	A		
	2N1971	2N3616		GPA			40	O		25	0.5	A	0.375	E					.9		3.0	A	36/5	
	2N1972	2N2219		SNA	0.6	A	30	R		110	50	m	50	T	35				2.0		50	m	36/	
	2N1973	2N2219		SNA	0.8	A	80	R		75	10	m	60	T					1.2		50	m	5/	
	2N1974	2N3498		SNA	0.8	A	80	R		35	10	m	50	T	15				1.2		50	m		
	2N1975	2N3498		SNA	0.8	A	80	R		15	10	m	40	T					1.2		50	m	5/	
D	2N1978			SNA	30	C	40	R		20	500	m	40	T	85				1.5		1.0	A	5/	
★	2N1980		1	GPA	170	C	30	O	15	50	5.0	A	0.15	E					.5		5.0	A		
★	2N1981		1	GPA	170	C	40	O	15	50	5.0	A	0.15	E									36/5	
★	2N1982		1	GPA	170	C	50	O	15	50	5.0	A	0.15	E					.5		5.0	A	36/5	
	2N1983	2N2218S	1	SNA	0.6	A	25	O	1.0				40	T	45				.5		5.0	A	36/5	
	2N1984	2N2219S	1	SNA	0.6	A	25	O	1.0				40	T	45								5/	
	2N1985	2N2218		SNA	0.6	A	25	O					40	T	45								5/	
	2N1986	2N2219		SNA	0.6	A	25	O		60	150	m	40	T					1.5		150	m		
	2N1987	2N2218		SNA	0.6	A	25	O		20	150	m	40	T					1.5		150	m	5/	
	2N1988	2N2218A		SNA	0.6	A	45	O		35	30	m	40	T	20				2.0		30	m	5/	
	2N1989	2N2218A		SNA	0.6	A	45	O		20	30	m	40	T					2.0		30	m	5/	
★	2N1990			SNA	0.6	A	100	B	1.0	20	30	m							.5		2.0	m	39/79	
★	2N1991			SPA	0.6	A	20	O	0.6	15	150	m	40	T	45				1.5		150	m	5/31	
D	2N1992	2N2221		SNA	0.35	A	15	O	0.05	30	1.0	m	300	T	6.0				.25		10	m	18/	
	2N1993			GNA	0.15	A	18	O	0.3	50	10	m	2.4	B	20				.2		10	m	5/	
	2N1994			GNG	0.15	A	15	O	0.3	15	10	m	2.4	B	20	1500/1800			.25		200	m	5/	
	2N1995			GNG	0.15	A	15	O	0.3	25	10	m	4.0	B	20	1300/1800			.25		200	m	5/	
	2N1996			GNG	0.15	A	15	O	0.3	35	10	m	6.4	B	20	1100/1800			.25		200	m	5/	
	2N1997			GPG	0.25	A	15	O	0.5	40	100	m	2.4	B	20	360/1150			.2		10	m	5/	
	2N1998			GPG	0.25	A	15	O	0.5	70	100	m	5.6	T	20	310/1080			.2		10	m	5/	
	2N1999			GPG	0.25	A	15	O	0.5	100	100	m	10	T	20	235/935			.2		10	m	5/	
	2N2000			GPG	0.3	A	15	O	1.0	50	100	m	1.6	B	35	820/1400			.35		500	m	5/	
	2N2001			GPG	0.3	A	15	O	1.0	100	100	m	4.8	B	35	700/1300			.2		100	m	5/	
	2N2002	2N5230		SPC	0.25	A	5	O																
	2N2003	2N5230		SPC	0.25	A	5	O																
	2N2004	2N5231		SPC	0.25	A	15	O	0.1	12	1.0	m	0.4	B									5/	
	2N2005	2N5231		SPC	0.25	A	15	O																
	2N2006			SPC	0.25	A	35	O																
	2N2007			SPC	0.25	A	35	O																
	2N2008	2N3500		SNA	0.8	A	110	O	0.5	30	10	m	40	T	15				2.5		25	m	5/	
	2N2009	THRU		THY	Table 6																			
	2N2014			THY	Table 6																			

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TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C/I_B	& I_C	Unit	PACKAGE To-Case No. / No.
2N2015	2N5881		SNA	150	C	50	O	10	15	5.0	A	0.18	E	400			1.2		5.0	A	36/
2N2016	2N5882		SNA	150	C	65	O	10	15	5.0	A	0.18	E	400			1.2		5.0	A	36/
2N2017	2N2405		SNA	1.0	A	60	O	1.0	50	200	m										
2N2018	2N5051		SNA	20	C	150	V	2.0	20	0.5	A	2.0	T				6.0		1.0	A	
2N2019	2N5052		SNA	20	C	200	V	2.0	20	0.5	A	2.0	T				6.0		1.0	A	
2N2020	2N5050		SNA	20	C	125	O	2.0	40	0.5	A	3.0	T				6.0		1.0	A	
2N2021	2N5051		SNA	20	C	140	O	2.0	40	0.5	A	3.0	T				6.0		1.0	A	
D 2N2022			GPG	0.15	A	12	S	0.05	25	10	m	250	T	8.0	60/100		1.2		50	m	28/
2N2023	THRU		THY	Table 6																	
2N2031			THY	Table 6																	
2N2032	2N4232		SNA	45	C	45	O	5.0	20	2.0	A	3.0	T				5.0		2.0	A	
2N2033	2N4238		SNG	5.0	C	60	O	3.0	20	500	m	1.0	T		1000/1500		.4		500	m	5/
2N2034	2N5334		SNG	14	C	60	O	3.0	20	1.0	A	1.0	T		1000/1500		.3		1.0	A	5/
2N2035	2N4232		SNG	17	C	60	O	3.0	20	1.5	A	1.0	T		1000/1500		.45		1.5	A	8/
2N2036	2N4232		SNG	17.5	C	60	O	3.0	20	2.0	A	1.0	T		1000/1500		1.0		2.0	A	37/
2N2038	2N4237		SNA	0.6	A	45	O		12	0.2	A	2.0	T				6.0		.2	A	
2N2039	2N4238		SNA	0.6	A	75	O		12	0.2	A	2.0	T				6.0		.2	A	
2N2040	2N4237		SNA	0.6	A	45	O		30	0.2	A	2.0	T				6.0		.2	A	
2N2041	2N4238		SNA	0.6	A	75	O		30	0.2	A	2.0	T				6.0		.2	A	
★ 2N2042,A			GPA	0.2	A	105	S	0.2	20	5.0	m	0.4	B	25							5/31
★ 2N2043,A			GPA	0.2	A	105	S	0.2	40	5.0	m	0.6	B	25							5/31
2N2048	2N2955		GPG	0.15	A	15	O	0.1	50	10	m	150	T	3.0	60/60		.14		10	m	9/
2N2048A			GPG	0.15	A	20	O	0.1	50	10	m	0.375	E	3.0	35/145		.14		10	m	9/
2N2049	2N2219A		SNE	0.8	A	50	R	0.5	100	150	m	50	T	25				3.0	1000	H	5/
D 2N2059			GPS	0.06	A	8	S	0.05	20	10	m	50	T	5.0	8/25		.2		10	m	1/
★ 2N2060		1	SNM	0.5	A	60	O	0.5	30	100	u	60	T	15	/15				1000	H	78/654
★ 2N2060A		1	SNM	0.5	A	60	O	0.5	30	100	u	60	T	15	/3.0		.6		1000	H	78/654
2N2060B			SNE			100	B	0.5										8.0	1000	H	
2N2061			GPA	40	C	10	O	3.0	10	0.5	A	0.02	E				2.0		.5	A	3/
2N2061A			GPA	90	C	15	O	5.0	20	2.0	A	0.1	E				1.0		5.0	A	3/
2N2062			GPA	40	C	10	O	3.0	20	2.0	A	0.04	E				1.0		2.0	A	3/
2N2062A			GPA	90	C	15	O	5.0	50	2.0	A	0.05	E				.7		5.0	A	3/
2N2063			GPA	35	C	15	O	3.0	10	2.0	A	0.02	E				2.0		2.0	A	3/
2N2063A			GPA	90	C	20	O	5.0	20	2.0	A	0.1	E				1.0		5.0	A	3/
2N2064			GPA	35	C	15	O	3.0	20	2.0	A	0.04	E				1.0		2.0	A	3/
2N2064A			GPA	90	C	20	O	5.0	50	2.0	A	0.05	E				.7		5.0	A	3/
2N2065			GPA	35	C	25	O	3.0	10	2.0	A	0.02	E				2.0		2.0	A	3/
2N2065A			GPA	90	C	40	O	5.0	20	2.0	A	0.1	E	0.1			1.0		5.0	A	3/
2N2066			GPA	35	C	25	O	3.0	20	2.0	A	0.04	E				1.0		2.0	A	3/
2N2066A			GPA	90	C	40	O	5.0	50	2.0	A	0.05	E				.7		5.0	A	3/
2N2067	2N1536		GPH	28	C	25	O	3.0	20	0.5	A	0.14	E				28		8	M	
2N2068	2N1531		GPA	28	C	55	O	3.0	20	0.5	A	0.14	E				28		1.0	A	
D 2N2069	2N1539		GPA	70	C	30	S	12	30	5.0	A	0.045	E				1.5		12	A	
D 2N2070	2N1541		GPA	70	C	60	S	12	30	5.0	A	0.045	E				1.5		12	A	3/
D 2N2071	MP1539		GPA	70	C	30	S	12	30	5.0	A	0.045	E				1.5		12	A	3/
D 2N2072	MP1541		GPA	70	C	60	S	12	30	5.0	A	0.045	E				1.5		12	A	3/
★ 2N2075		1	GPA	170	C	80	S	15	20	5.0	A	0.1	E				.7		12	A	36/5
★ 2N2075A		1	GPA	170	C	80	S	15	20	5.0	A	0.1	E				.7		12	A	36/5
★ 2N2076		1	GPA	170	C	70	S	15	20	5.0	A	0.1	E				.7		12	A	36/5
★ 2N2076A		1	GPA	170	C	70	S	15	20	5.0	A	0.1	E				.7		12	A	36/5
★ 2N2077		1	GPA	170	C	50	S	15	20	5.0	A	0.1	E				.9		12	A	36/5
★ 2N2077A		1	GPA	170	C	50	S	15	20	5.0	A	0.1	E				.9		12	A	36/5
★ 2N2078		1	GPA	170	C	40	S	15	20	5.0	A	0.1	E				.9		12	A	36/5
★ 2N2078A		1	GPA	170	C	40	S	15	20	5.0	A	0.1	E				.9		12	A	36/5
★ 2N2079		1	GPA	170	C	80	S	15	35	5.0	A	0.175	E				.7		12	A	36/5
★ 2N2079A		1	GPA	170	C	80	S	15	35	5.0	A	0.175	E				.7		12	A	36/5
★ 2N2080		1	GPA	170	C	70	S	15	35	5.0	A	0.175	E				.7		12	A	36/5
★ 2N2080A		1	GPA	170	C	70	S	15	35	5.0	A	0.175	E				.7		12	A	36/5
★ 2N2081		1	GPA	170	C	50	S	15	35	5.0	A	0.175	E				.9		12	A	36/5
★ 2N2081A			GPA	170	C	50	S	15	35	5.0	A	0.175	E				.9		12	A	36/5
★ 2N2082		1	GPA	170	C	40	S	15	35	5.0	A	0.175	E				.9		12	A	36/5
★ 2N2082A		1	GPA	170		40	S	15	35	5.0	A	0.175	E				.9		12	A	36/5
D 2N2083			GPA	0.06	A	30	B	0.01	25	1.0	m	30	T	3.2							7/
2N2084			GPH	.125	A	20	O	0.01	40	1.0	m			4.0			12		100	M	33/
2N2085			GNA	0.15	A	23	X		50	10	m	4.8	T								5/
2N2086	2N3020		SNA	0.6	A	80	R	0.5	20	150	m	150	T	12							5/
2N2087	2N3020		SNG	0.6	A	80	R	0.5	40	150	m	150	T	12	85/155						5/
2N2089			GPF	0.1	A	20	R	.011	40	1.0	m	44	T	4.0				9.5	100	M	7/
2N2090			GPA	0.1	A	20	R	.011	40	1.0	m	44	T	4.0							7/
2N2091			GPF	0.1	A	20	R	.011	40	1.0	m	44	T				27	4.5	10	M	7/

	TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min @ $V_{CE(sat)}$ Volts Max	NF dB Max @ I_C/I_B	f & I_C	Unit	PACKAGE To-Case No.
	2N2092			GPF	0.1	A	20	R	.011	40	1.0 m	44	T				40	3.0	1	M	7/
D	2N2093			GPA	0.1	A	25	R	.011	40	1.0 m	30	T				40		10	K	7/
	2N2095			GPP	1.0	A	15	O	0.3			500	T	8.0			6.0		160	M	31/
★	2N2096			GPG	0.25	A	12	O	0.5	15	400 m			20	*35/130*		.6		*200*	*m*	31/
★	2N2097			GPG	0.25	A	20	O	0.5	20	400 m			20	*20/90*		.5		*200*	*m*	31/
D	2N2098			GPH	1.0	A	15	O	0.3			500	B	8.0			6.0		160	M	9/
★	2N2099			GPG	0.25	A	12	O	0.5	15	400 m			20	*35/130*		.6		*200*	*m*	9/
★	2N2100			GPG	0.25	A	20	O	0.5	20	400 m			20	*20/90*		.5		*200*	*m*	9/
D	2N2100A			GPG	0.3	A	20	O	0.5	20	400 m			20	*20/90*		.5		*200*	*m*	9/
	2N2101	2N4912		SNA	75	C	40	O		15	1.0 A	0.025	T				*5.0*		*1.0*	*A*	
	2N2102			SNA	5.0	C	80	R	1.0	35	10 m			15			.5		*150*	*m*	5/
	2N2102A	2N5334		SNE	1.0	A	65	O	1.0	40	150 m	60	T	15				6.0	1000	H	5/
D	2N2104	2N3052		SPA	3.0	C	35	O	0.6	25	150 m	60	T				*1.5*		*150*	*m*	5/
D	2N2105	2N3052		SPA	3.0	C	35	O		15	150 m	50	T				*1.5*		*150*	*m*	5/
	2N2106	2N4238		SNA	1.0	A	60	R	0.5	12	200 m						*5.0*		*200*	*m*	5/
	2N2107	2N4238		SNA	1.0	A	60	R	0.5	30	200 m						*2.0*		*200*	*m*	5/
	2N2108	2N5681		SNA	1.0	A	60	R	0.5	75	200 m						*2.0*		*200*	*m*	5/
	2N2109	2N5885		SNG	250	C	50	V	30	10	10 A					*20K/25K*	*1.5*		*10*	*A*	
	2N2110	2N5629		SNG	250	C	100	V	30	10	10 A					*20K/25K*	*1.5*		*10*	*A*	
	2N2112			SNG	250	C	200	V	30	10	10 A					*20K/25K*	*1.5*		*10*	*A*	
	2N2113			SNG	250	C	250	V	30	10	10 A					*20K/25K*	*1.5*		*10*	*A*	
	2N2114			SNG	250	C	300	V	30	10	10 A					*20K/25K*	*1.5*		*10*	*A*	
	2N2117			SNG	250	C	100	V	30	10	15 A					*20K/25K*	*1.5*		*15*	*A*	
	2N2118			SNG	250	C	150	V	30	10	15 A					*20K/25K*	*1.5*		*15*	*A*	
	2N2119			SNG	250	C	200	V	30	10	15 A					*20K/25K*	*1.5*		*15*	*A*	
	2N2120			SNG	250	C	250	V	10	10	15 A					*20K/25K*	*1.5*		*15*	*A*	
D	2N2121			SNG	250	C	300	V	10	10	15 A					*20K/25K*	*1.5*		*15*	*A*	
	2N2123			SNG	250	C	50	V	30	10	20 A					*20K/25K*	*1.5*		*20*	*A*	
	2N2124			SNG	250	C	100	V	30	10	20 A					*20K/25K*	*1.5*		*20*	*A*	
	2N2125			SNG	250	C	150	V	30	10	20 A					*20K/25K*	*1.5*		*20*	*A*	
	2N2126			SNG	250	C	200	V	30	10	20 A					*20K/25K*	*1.5*		*20*	*A*	
	2N2127			SNG	250	C	250	V	10	10	20 A					*20K/25K*	*1.5*		*20*	*A*	
D	2N2128			SNG	250	C	300	V	10	10	20 A					*20K/25K*	*1.5*		*20*	*A*	
	2N2130			SNG	250	C	50	V	30	10	25 A					*20K/25K*	*1.5*		*25*	*A*	
	2N2131			SNG	250	C	100	V	30	10	25 A					*20K/25K*	*1.5*		*25*	*A*	
	2N2132			SNG	250	C	150	V	30	10	25 A					*20K/25K*	*1.5*		*25*	*A*	
	2N2133			SNG	250	C	200	V	30	10	25 A					*20K/25K*	*1.5*		*25*	*A*	
D	2N2134			SNG	250	C	250	V	10	10	25 A					*20K/25K*	*1.5*		*25*	*A*	
	2N2135			SNG	250	C	300	V	10	10	25 A					*20K/25K*	*1.5*		*25*	*A*	
★	2N2137		1	GPA	62.5	C	30	S	3.0	30	0.5 A	0.36	E				.5		*2.0*	*A*	3/
★	2N2137A		1	GPA	62.5	C	20	O	3.0	30	0.5 A	0.36	E				.5		*2.0*	*A*	3/
★	2N2138		1	GPA	62.5	C	45	S	3.0	30	0.5 A	0.36	E				.5		*2.0*	*A*	3/
★	2N2138A		1	GPA	62.5	C	30	O	3.0	30	0.5 A	0.36	E				.5		*2.0*	*A*	3/
★	2N2139		1	GPA	62.5	C	60	S	3.0	30	0.5 A	0.36	E				.5		*2.0*	*A*	3/
★	2N2139A		1	GPA	62.5	C	45	O	3.0	30	0.5 A	0.36	E				.5		*2.0*	*A*	3/
★	2N2140		1	GPA	62.5	C	75	S	3.0	30	0.5 A	0.36	E				.5		*2.0*	*A*	3/
★	2N2140A		1	GPA	62.5	C	60	O	3.0	30	0.5 A	0.36	E				.5		*2.0*	*A*	3/
★	2N2141		1	GPA	62.5	C	90	S	3.0	30	0.5 A	0.36	E				.5		*2.0*	*A*	3/
★	2N2141A		1	GPA	62.5	C	65	O	3.0	30	0.5 A	0.36	E				.5		*2.0*	*A*	3/
★	2N2142		1	GPA	62.5	C	30	S	3.0	50	0.5 A	0.6	E				.5		*2.0*	*A*	3/
★	2N2142A		1	GPA	62.5	C	30	S	3.0	50	0.5 A	0.6	E				.5		*2.0*	*A*	3/
★	2N2143		1	GPA	62.5	C	45	S	3.0	50	0.5 A	0.6	E				.5		*2.0*	*A*	3/
★	2N2143A		1	GPA	62.5	C	30	O	3.0	50	0.5 A	0.6	E				.5		*2.0*	*A*	3/
★	2N2144			GPA	62.5	C	60	S	3.0	50	0.5 A	0.6	E				.5		*2.0*	*A*	3/
★	2N2144A			GPA	62.5	C	45	O	3.0	50	0.5 A	0.6	E				.5		*2.0*	*A*	3/
★	2N2145			GPA	62.5	C	75	S	3.0	50	0.5 A	0.6	E				.5		*2.0*	*A*	3/
★	2N2145A			GPA	62.5	C	60	O	3.0	50	0.5 A	0.6	E				.5		*2.0*	*A*	3/
★	2N2146			GPA	62.5	C	90	S	3.0	50	0.5 A	0.6	E				.5		*2.0*	*A*	3/
★	2N2146A			GPA	62.5	C	65	O	3.0	50	0.5 A	0.6	E				.5		*2.0*	*A*	3/
	2N2147	2N3617		GPA	12.5	C	50	O		100	1.0 A	3.0	T				*1.0*		*4.0*	*A*	
	2N2148	2N3615		GPA	12.5	C	40	O		40	1.0 A	2.0	T								
	2N2150	2N5477		SNA	30	C	80	O	2.0	20	1.0 A	10	T	160			*1.0*		*1.0*	*A*	
	2N2151	2N5477		SNA	30	C	80	O	2.0	40	1.0 A	10	T	160			*1.0*		*1.0*	*A*	
★	2N2152		1	GPA	170	C	45	S	30	50	5.0 A	0.1	E				.1		*5.0*	*A*	36/5
	2N2152A			GPA	170	C	30	O	30	50	5.0 A	0.1	E				.1		*5.0*	*A*	36/
★	2N2153		1	GPA	170	C	60	S	30	50	5.0 A	0.1	E				.1		*5.0*	*A*	36/5
	2N2153A			GPA	170	C	45	O	30	50	5.0 A	0.1	E				.1		*5.0*	*A*	36/
★	2N2154		1	GPA	170	C	75	S	30	50	5.0 A	0.1	E				.1		*5.0*	*A*	36/5
	2N2154A			GPA	170	C	60	O	30	50	5.0 A	0.1	E				.1		*5.0*	*A*	36/
	2N2155		1	GPA	170	C	90	S	30	50	5.0 A	0.1	E				.1		*5.0*	*A*	36/

	TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C/I_B	& I_C	Unit	PACKAGE To-Case No.
	2N2155A			GPA	170	C	65	O	30	50	5.0 A	0.1	E				.1		5.0 A		36/
★	2N2156		1	GPA	170	C	45	S	30	80	5.0 A	0.16	E				.1		5.0 A		36/5
	2N2156A			GPA	170	C	30	O	30	80	5.0 A	0.16	E				.1		5.0 A		36/
★	2N2157			GPA	170	C	60	S	30	80	5.0 A	0.16	E				.1		5.0 A		36/5
	2N2157A			GPA	170	C	45	O	30	80	5.0 A	0.16	E				.1		5.0 A		36/
★	2N2158		1	GPA	170	C	75	S	30	80	5.0 A	0.16	E				.1		5.0 A		36/5
	2N2158A			GPA	170	C	60	O	30	80	5.0 A	0.16	E				.1		5.0 A		36/
	2N2159			GPA	170	C	90	S	30	80	5.0 A	0.16	E				.1		5.0 A		36/
D	2N2160			UJT	Table 8																
D	2N2161	2N2222		SNG	0.2	A	35	O	0.05	60	10 m	25	T	3.0		350/700	1.5		10 m		5/31
	2N2162	2N2946		SPC	0.15	A	30	O	0.05			14	T	10							5/31
	2N2163	2N2945		SPC	0.15	A	15	O	0.05			14	T	10							5/31
	2N2164	2N2944		SPC	0.15	A	8	O	0.05			24	T	10							5/31
	2N2165	2N2946		SPC	0.15	A	30	O	0.05			10	T	10							5/31
	2N2166	2N2945		SPC	0.15	A	15	O	0.05			10	T	10							5/31
	2N2167	2N2944		SPC	0.15	A	8	O	0.05			16	T	10							5/31
	2N2168			GPS	0.06	A	15	O	0.1	50	10 m			2.5		18/18	.12		10 m		9/
	2N2169			GPS	0.06	A	15	O	0.1	40	10 m			2.5		18/18	.15		10 m		9/
	2N2170			GPS	0.06	A	10	O	0.1	40	10 m			3.0		20/20	.18		10 m		9/
★	2N2171		1	GPA	0.2	A	25	R	0.4	110	20 m										5/31
	2N2172			GPA	0.2	A	15	O	0.4	30	10 m	4.0	B				.2		10 m		5/
	2N2173			GPG	0.24	A	15	O	0.75	30	200 m			6.0		60/180	.4		200 m		39/
	2N2175			SPA	0.1	A	6	O	0.05	30	20 u	10	T								5/
	2N2176			SPA	0.1	A	6	O	0.05	30	20 u	10	T								18/
	2N2177			SPE	0.1	A	6	O	0.05	15	5.0 u	6.4	B	14				15	1000	H	5/
	2N2178			SPE	0.1	A	6	O	0.05	15	5.0 u	6.4	B	14				15	1000	H	18/
D	2N2180			GPA	0.05	A	6	O	0.05	100	10 m	60	T	12			.08		10 m		24/
	2N2181	2N2945		SPC	0.15	A	25	O	0.05	10	5.0 m	6.0	T	12							1/
	2N2182	2N2945		SPC	0.15	A	25	O	0.05	10	5.0 m	6.0	T	12							1/
D	2N2183	2N2944		SPC	0.15	A	10	O	0.05	10	5.0 m	6.0	T	12							1/
D	2N2184	2N2944		SPC	0.15	A	10	O	0.05	10	5.0 m	6.0	T	12							1/
	2N2185	2N2946		SPC	0.15	A	30	O	0.05			6.5	T	9.0							18/
	2N2186	2N2946		SPC	0.15	A	30	O	0.05			6.5	T	9.0							18/
	2N2187	2N2946		SPC	0.15	A	30	O	0.05			6.5	T	9.0							18/
	2N2188	2N3323		GPA	.125	A	25	O	0.03	40	1.5 m	60	T	2.5							58/
	2N2189	2N3323		GPA	.125	A	25	O	0.03	60	1.5 m	102	T	2.5							58/
	2N2190	2N3323		GPA	.125	A	25	O	0.03	40	1.5 m	60	T	2.5							58/
	2N2191	2N3323		GPA	.125	A	25	O	0.03	60	1.5 m	102	T	2.5							58/
	2N2192	2N2193A		SNG	0.8	A	40	O	1.0	100	150 m			20		70/200	.35		150 m		5/31
	2N2192A	2N2193A		SNG	0.8	A	40	O	1.0	100	150 m			20		70/200	.25		150 m		5/31
	2N2192B	2N2193A		SNG	0.8	A	40	O	1.0	100	150 m			20		70/200	.18		150 m		5/31
	2N2193	2N2193A		SNG	0.8	A	50	O	1.0	40	150 m			20		70/200	.35		150 m		5/31
★	2N2193A			SNG	0.8	A	50	O	1.0	40	150 m			20		70/200	.25		150 m		5/31
	2N2193B	2N2193A		SNG	0.8	A	50	O	1.0	40	150 m			20		70/200	.18		150 m		5/31
	2N2194	2N2193A		SNG	0.8	A	40	O	1.0	40	150 m			20		70/200	.35		150 m		5/31
	2N2194A	2N2193A		SNG	0.8	A	40	O	1.0	20	150 m			20		70/200	.25		150 m		5/31
	2N2194B	2N2193A		SNG	0.8	A	40	O	1.0	20	150 m			20		70/200	.18		150 m		5/31
	2N2195	2N2193A		SNG	0.8	A	25	O	1.0	20	150 m			20		70/200	.35		150 m		5/31
	2N2195A	2N2193A		SNA	0.8	A	25	O	1.0	20	150 m			20			.25		150 m		5/31
	2N2195B	2N2193A		SNA	0.8	A	25	O	1.0	20	150 m			20			.18		150 m		5/
	2N2196	2N3766		SNA	2.0	A	60	R	1.0	30	0.2 A						2.0		.2 A		
	2N2197	2N3766		SNA	2.0	A	60	R	1.0	75	0.2 A						2.0		.2 A		
	2N2198			SNA	.005	A	80	O		35	0.1 A	4.0	T				6.0		.2 A		
	2N2199			GPA	.075	A	10	O	0.1	9.0	3.0 m	120	T	2.8							9/
	2N2200			GPA	.075	A	10	O		9.0	3.0 m	120	T								
	2N2201	2N5681		SNA	1.0	C	100	O	1.0	25	200 m	10	T	75			1.7		200 m		
	2N2202	2N5681		SNA	1.0	C	100	O	1.0	25	200 m	10	T	75			1.7		200 m		
	2N2203	2N5681		SNA	1.0	C	100	O	1.0	25	200 m	10	T	75			1.7		200 m		
	2N2204	2N5681		SNA	1.0	C	100	O	1.0	25	200 m	10	T	75			1.7		200 m		
	2N2205	2N835		SNS	1.0	C	12	O	0.2	20	10 m			6.0		40/75	.22		10 m		18/
★	2N2206	2N835	1	SNS	1.0	C	12	O	0.2	40	10 m			6.0		40/75	.22		10 m		46/
	2N2207			GPA	0.26	A	50	R	0.05	36	10 m	112	B								7/
D	2N2208			GPF	0.12	A	10	O	0.01	15	1.5 m			3.0				10	50	M	44/
D	2N2209			GPA	0.15	A	12	O	0.1	50	24 m	4.8	B	20			.15		12 m		5/
	2N2210	2N2075		GPA	75	C	65			25	5.0 A	0.125	E				.6		12 A		
D	2N2211			GPA	90	C	60	S	5.0	60	1.0 A	0.3	E				.8		2.0 A		3/
★	2N2212		1	GPA	60	C	60	O	10	50	5.0 A	0.45	T				1.0		5.0 A		41/4
D	2N2214	2N835		SNA	0.25	C	15	O	0.2	25	10 m	200	T	7.0			.2		10 m		
D	2N2216	2N3498		SPA	3.0	C	100	O	0.25	25	50 m	50	T	15			5.0		50 m		5/
	2N2217	2N2218S		SNA	0.8	A	30	O	0.8	20	150 m	250	T	8.0			.4		150 m		5/

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min @ V_{CE} (sat) Volts Max	NF dB Max @ I_C/I_B	f & I_C	Unit	PACKAGE To-Case No. No.
★ 2N2218			SNA	0.8	A	30	O	0.8	40	150 m	250	T	8.0							5/31
★ 2N2218A			SNA	0.8	A	40	O	0.8	40	.15 A	250	T	8.0							5/31
★ 2N2218AS			SNA	0.8	A	40	O	0.8	40	.15 A	250	T	8.0							39/31
★ 2N2218S			SNA	0.8	A	30	O	0.8	40	150 m	250	T	8.0							39/31
★ 2N2219			SNE	0.8	A	30	O	0.8	100	150 m	250	T	8.0				4.0	1000	H	5/31
★ 2N2219A			SNE	0.8	A	40	O	0.8	100	.15 A	300	T	8.0				4.0	1000	H	5/31
★ 2N2219AS			SNE	0.8	A	40	O	0.8	100	.15 A	300	T	8.0				4.0	1000	H	3/931
★ 2N2219S			SNE	0.8	A	30	O	0.8	100	150 m	250	T	8.0				4.0	1000	H	39/31
2N2220	2N2222		SNA	0.5	A	30	O	0.8	20	150 m	250	T	8.0			.4		150	m	18/
★ 2N2221		1	SNE	0.5	A	30	O	0.8	40	150 m	250	T	8.0							18/22
★ 2N2221A		1	SNE	0.5	A	40	O	0.8	40	.15 A	250	T	8.0							18/22
★ 2N2222		1	SNE	0.5	A	30	O	0.8	100	150 m	250	T	8.0							18/22
★ 2N2222A		1	SNE	0.5	A	40	O	0.8	100	.15 A	300	T	8.0				4.0	1000	H	18/22
D 2N2222B	2N2222A		SNE	1.8	C	40	O	1.0	100	150 m	300	T	8.0				4.0	1000	H	18/
★ 2N2223		1	SNM	0.5	A	60	O	0.5	25	100 u	50	T	15	/15		1.2		50	m	78/654
★ 2N2223A		1	SNM	0.5	A	60	O	0.5	25	100 u	50	T	15	/5.0		1.2		50	m	78/654
2N2224	2N2218S	1	SNA	0.8	A	40	O	0.5	35	10 m	250	T				.4		150	m	78/654
D 2N2225			GPA	0.2	A	4	O	0.4	100	100 m	20	B	20			.2		50	m	5/
2N2226	2N6057		SNA	150	C	50	V	10	100	9.0 A	0.7	E				3.5		9.0	A	
2N2227	2N6057		SNA	150	C	100	V	10	100	9.0 A	0.7	E				3.5		9.0	A	
2N2228			SNA	150	C	150	V	10	100	9.0 A	0.7	E				3.5		9.0	A	
2N2229			SNA	150	C	200	V	10	100	9.0 A	0.7	E				3.5		9.0	A	
2N2230			SNA	150	C	50	V	10	350	9.0 A	1.4	E				3.5		9.0	A	
2N2231			SNA	150	C	100	V	10	350	9.0 A	1.4	E				3.5		9.0	A	
2N2232			SNA	150	C	150	V	10	350	9.0 A	1.4	E				3.5		9.0	A	
2N2233			SNA	150	C	200	V	10	350	9.0 A	1.4	E				3.5		9.0	A	
D 2N2234			SNS	12.5	C	20	O	0.5	15	100 m	50	T		30/600		.25		100	m	3/
D 2N2235			SNS	12.5	C	20	O	0.5	40	100 m	100	T		25/600		.25		100	m	3/
2N2236	2N2218		SNG	.575	A	20	O	0.5	15	100 m	50	T	35	30/600		.25		100	m	5/
2N2237	2N2218	1	SNG	.575	A	20	O	0.5	40	100 m	100	T	35	25/600		.25		100	m	5/
D 2N2238			GPA	0.3	A	30	S	0.05	10	10 m	400	T	3.0			10				5/
2N2239	2N4232		SNA	1.0	A	50	R	0.5	30	200 m		T				3.0		200	m	
2N2240	2N2218		SNA	0.6	A	20	O	0.5	40	1.0 m	50	T	35			1.0		50	m	5/
★ 2N2241	2N2219A		SNA	0.6	A	20	O		100	1.0 m	50	T				1.0		50	m	
2N2242	2N706	1	SNS	0.36	A	15	O	.225	40	10 m	250	T	6.0	30/50		.7		100	m	18/22
2N2243	2N3019		SNG	.8	A	80	O	1.0	40	.15 A	50	T	15	120/600		.35		.15	A	5/
2N2243A	2N3019		SNA	.8	A	80	O	1.0	40	.15 A	50	T	15			.25		.15	A	5/
D 2N2244			SNA	.5	A	20	O	.05	5.0	2.0 u	60	T	8.0			.2		1.0	m	18/
D 2N2245			SNA	.5	A	20	O	.05	10	2.0 u	60	T	8.0			.2		1.0	m	18/
D 2N2246			SNA	.5	A	20	O	.05	5.0	2.0 u	60	T	8.0			.2		1.0	m	18/
D 2N2247			SNA	.5	A	45	O	.05	5.0	2.0 u	60	T	8.0			.2		1.0	m	18/
D 2N2248			SNA	.5	A	45	O	.05	10	2.0 u	60	T	8.0			.2		1.0	m	18/
D 2N2249			SNA	.5	A	45	O	.05	20	2.0 u	60	T	8.0			.2		1.0	m	18/
D 2N2250			SNA	.5	A	20	O	.5	5.0	2.0 u	60	T	8.0			.2		1.0	m	18/
D 2N2251			SNA	.5	A	20	O	.5	10	2.0 u	60	T	8.0			.2		1.0	m	18/
D 2N2252			SNA	.5	A	20	O	.5	20	2.0 u	60	T	8.0			.2		1.0	m	18/
D 2N2253			SNA	.5	A	50	O	.5	5.0	2.0 u	60	T	8.0			.2		1.0	m	18/
D 2N2254			SNA	.5	A	50	O	.5	10	2.0 u	60	T	8.0			.2		1.0	m	18/
D 2N2255			SNA	.5	A	50	O	.5	20	2.0 u	60	T	8.0			.2		1.0	m	18/
★ 2N2256		1	SNS	.3	A	7	S	.1	17	10 m			5.0	7.0/7.0						18/22
★ 2N2257		1	SNS	.3	A	7	S	.1	40	10 m			5.0	8.0/7.0						18/22
★ 2N2258			GPS	.15	A	7	S	.1	17	10 m			8.0	8.0/7.0						18/22
★ 2N2259			GPS	.15	A	7	S	.1	40	10 m			8.0	8.0/7.0						
2N2266	2N2145		GPG	50	C	55		5.0	40	500 m	.2	T		15K/22K	.75			5.0	A	
2N2267	2N2145		GPG	50	C	55		5.0	40	500 m	.2	T		15K/22K	.75			5.0	A	
D 2N2268	2N2145		GPG	50	C	55		5.0	40	500 m	.2	T		15K/22K	.75			5.0	A	
D 2N2269	2N2145		GPG	50	C	55		5.0	40	500 m	.2	T		15K/22K	.75			5.0	A	
2N2270			SNE	5.0	C	45	O	1.0	30	1.0 m			15				6.0	10	K	5/
2N2270S			SNE	5.0	C	45	O	1.0	30	1.0 m			15				6.0	10	K	39/
2N2271			GPA	.25	A	15	R	.5	50	35 m	5.0	E				25		1000	H	5/
D 2N2272	2N929		SNA	.36	A	20	R		80	10 m						.7		200	m	
★ 2N2273			GPH	.1	A	15	O	.1	20	1.0 m	200	T	3.5			10		30	M	18/22
2N2274	2N2946		SPC	.15	A	25	O	.05	10	5.0 m	6.0	T	9.0							18/
2N2275	2N2946		SPC	.15	A	25	O	.05	10	5.0 m	6.0	T	9.0							18/
2N2276	2N2944		SPC	.15	A	10	O	.05	10	5.0 m	6.0	T	9.0							18/
2N2277	2N2944		SPC	.15	A	10	O	.05	10	5.0 m	6.0	T	9.0							18/
2N2278	2N2945		SPC	.15	A	15	O	.05			7.6	T	9.0							18/
2N2279	2N2945		SPC	.15	A	15	O	.05			7.6	T	9.0							18/
2N2280	2N2944		SPC	.15	A	6	O	.05			16	T	10			.1		5.0	m	18/
2N2281	2N2944		SPC	.15	A	6	O	.05			16	T	10			.1		5.0	m	18/

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / @ I_C/I_B	& I_C	Unit	PACKAGE To-Case No.
2N2282			GPA	5.0	C	30	O	3.0	15	3.0 A		20	T				.4		1.0 A		37/
2N2283			GPA	5.0	C	60	O	3.0	15	3.0 A		20	T				.4		1.0 A		37/
2N2284			GPA	5.0	C	100	O	3.0	15	3.0 A		20	T				.4		1.0 A		37/
★ 2N2285		1	GPA	100	C	30	O	25	35	10 A		.6	T				.65		25 A		3/
★ 2N2286		1	GPA	100	C	60	O	25	35	10 A		.6	T				.65		25 A		3/
★ 2N2287		1	GPA	100	C	80	O	25	35	10 A		.6	T				.65		25 A		3/
★ 2N2288		1	GPA	60	C	40	R	10	20	5.0 A		.45	T				1.0		5.0 A		3/
★ 2N2289		1	GPA	60	C	80	R	10	20	5.0 A		.45	T				1.0		5.0 A		3/
★ 2N2290		1	GPA	60	C	120	R	10	20	5.0 A		.45	T				1.0		5.0 A		3/
★ 2N2291		1	GPA	60	C	30	O	10	50	5.0 A		.45	T				1.0		5.0 A		3/
★ 2N2292		1	GPA	60	C	70	O	10	50	5.0 A		.45	T				1.0		5.0 A		3/
★ 2N2293		1	GPA	60	C	70	O	10	50	5.0 A		.45	T				1.0		5.0 A		3/
2N2294			GPG	70	C	30	O	10	50	5.0 A		.45	T			10K/10K	1.0		5.0 A		41/
2N2295			GPG	70	C	50	O	10	50	5.0 A		.45	T			10K/10K	1.0		5.0 A		41/
2N2296			GPG	70	C	70	O	10	50	5.0 A		.45	T			10K/10K	1.0		5.0 A		41/
2N2297			SNA	.8	A	35	O	1.0	40	150 m		60	T	12			.2		150 m		5/
2N2303			SPA	.6	A	50	R	.5	75	150 m		60	T	45			1.5		150 m		18/
2N2304	2N4910		SNA	25	C	60	V	3.0	20	300 m							.9		300 m		3/
2N2305	2N5068		SNA	.3	C	60	V	6.0	15	800 m							1.2		600 m		3/
D 2N2306			SNA	13	C	50	O	2.0	12	.35 A		175	T	40			2.0		1.0 A		8/
2N2308	2N4912		SNA	25	C	80	O	3.0	20	1.0 A		.6	E				1.0		1.0 A		8/
2N2309	2N2218		SNE	.6	A	30	O	.5	25	.2 m				25				5.0	1000 H		5/
2N2310	2N3020		SNA	.5	A	60	O		12	200 m							5.0		200 m		46/
2N2311			SNA	.5	A	100	O		12	200 m							5.0		200 m		46/
2N2312	2N3020		SNA	.5	A	60	O		30	200 m							5.0		200 m		46/
D 2N2313			SNA	.5	A	100	O		30	200 m							5.0		200 m		46/
2N2314	2N2221A		SNA	.5	A	40	R		20	150 m		40	T	35			5.0		150 m		46/
2N2315	2N2221A		SNA	.5	A	40	R		40	150 m		50	T	35			1.5		150 m		46/
2N2316	2N3020		SNA	.5	A	80	R		40	150 m		50	T	20			5.0		150 m		46/
2N2317	2N2193		SNE	.5	A	50	R		40	150 m		60	T	25				12	1000 H		46/
2N2318	2N929		SNS	.36	A	25	S		15	.1 m		300	T	5.0	60/50		.35		20 m		18/
★ 2N2319	2N929	1	SNS	.3	A	25	S		15	.1 m		300	T	5.0	60/50		.35		20 m		46/
D 2N2320	2N929		SNS	.6	A	25	S		15	.1 m		300	T	5.0	60/50		.35		20 m		5/
★ 2N2322	THRU		THY	Table 6																	
★ 2N2329A			THY	Table 6																	
★ 2N2330	2N4124		SNC	.8	A	20	O	.5	50	10 m		100	T	10							5/31
★ 2N2330S	2N4124		SNC	.8	A	20	O	.5	50	10 m		100	T	10							39/31
★ 2N2331			SNC	0.5	A	20	O	0.5	50	10 m		100	T	10							18/22
2N2332	2N5230		SPC	0.15	A	15	O	0.1						20							18/22
2N2333	2N5229	1	SPC	0.15	A	5	O	0.1						20							18/22
2N2334	2N5230		SPC	0.15	A	15	O	0.1						20							18/22
2N2335	2N5230		SPC	0.15	A	15	O	0.1						20							18/22
2N2336	2N5231		SPC	0.15	A	35	O	0.1						20							18/22
2N2337	2N5231		SPC	0.15	A	35	O	0.1						20							18/22
2N2338	2N5877		SNA	150	C	40	O	7.5	7.0	6.0 A		0.105	E	600			1.5		3.0 A		36/
2N2339	2N4910		SNA	40	C	40	O	2.5	6.0	1.5 A		0.7	T	300			1.5		.3 A		
D 2N2340	2N4237		SNG	15	C	40	O	1.0	10	750 m		5.5	E			400/1800	4.0		750 m		37/
D 2N2341	2N5334		SNG	15	C	40	O	1.0	40	750 m		14	E			400/1800	4.0		750 m		37/
D 2N2342	2N4337		SNG	15	C	40	O	1.0	10	750 m		5.5	E			400/1800	3.0		750 m		37/
D 2N2343	2N5334		SNG	15	C	40	O	1.0	40	750 m		14	E			400/1800	2.5		750 m		37/
2N2344	THRU		THY	Table 6																	
2N2348			THY	Table 6																	
2N2349	2N929		SNA	0.15	A	24	O	0.25	120	10 m				4.0			1.5		10 m		5/
2N2350	2N2222A		SNA	0.4	A	40	O	1.0	100	150 m		50	T	20			.35		150 m		46/
2N2350A	2N2222A		SNA	0.4	A	40	O	1.0	100	150 m		50	T	20			.25		150 m		46/
2N2351	2N2193		SNA	0.4	A	50	O	1.0	40	150 m		50	T	20			.35		150 m		46/
2N2351A	2N2193		SNA	0.4	A	50	O	1.0	40	150 m		50	T	20			.25		150 m		46/
2N2352	2N2194		SNA	0.4	A	40	O	1.0	20	150 m		50	T	20			.35		150 m		46/
2N2352A	2N2194		SNA	0.4	A	40	O	1.0	20	150 m		50	T	20			.25		150 m		46/
2N2353	2N2221		SNA	0.4	A	25	O	1.0	20	150 m		50	T	20			.35		150 m		46/
2N2353A	2N2221		SNA	0.35	A	25	O	1.0	20	150 m		50	T	20			.25		150 m		46/
2N2354			GNA	0.18	A	15	R	0.15	50	35 m							25		1000 H		22/
2N2356			SNC	0.6	A	7	O	0.5				50	T	20							
2N2356A			SNC	0.6	A	7	O	0.5				50	T	20							
★ 2N2357		1	GPG	170	C	30	O	50	30	20 A		0.6	T			15K/10K	.9		50 A		41/161
★ 2N2358		1	GPG	170	C	60	O	50	30	20 A		0.6	T			15K/10K	.9		50 A		41/161
★ 2N2359		1	GPG	170	C	80	O	50	30	20 A		0.6	T			15K/10K	.9		50 A		41/161
2N2360	2N3283		GPA	0.06	A	20	O	0.05	10	2.0 m				1.3							12/
2N2361	2N3284		GPA	0.06	A	20	O	0.05	10	2.0 m				1.3							12/
2N2362	2N3284		GPA	0.06	A	20	S	0.05	10	2.0 m				1.3			.6		10 m		12/

	TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF dB Max	@ f & I_C	Unit	PACKAGE To-Case No. No.
																t_{on} ns Max	t_{off} ns Max	$V_{CE(sat)}$ Volts Max	@ $\frac{I_C}{I_B}$			
D	2N2363			GPF	.075	A	20	O	0.05	10	2.0	m	800	T	3.0				5.5	200	M	
	2N2364	2N3020		SNG	0.4	A	80	O	1.0	40	150	m	50	T	15	*570/150*		.35		*150*	*m*	46/
	2N2364A			SNG	0.4	A	80	O	1.0	40	150	m	50	T	15	*570/150*		.25		*150*	*m*	46/
★	2N2368		1	SNS	0.36	A	40	S	0.5	20	10	m	400	T	4.0	*12/15*		.25		*10*	*m*	18/22
★	2N2369		1	SNS	0.36	A	40	S	0.2	40	10	m	500	T	4.0	*12/18*		.25		*10*	*m*	18/22
★	2N2369A		1	SNS	0.36	A	40	S			10	m	500	T	0.2	*12/18*		.2		*10*	*m*	18/22
	2N2370			SPE	0.2	A	15	O	0.1	15	25	u			15				4.0	5000	H	5/31
	2N2371			SPE	0.2	A	15	O	0.1	20	25	u			15				2.5	5000	H	5/31
	2N2372			SPE	0.15	A	15	O	0.1	15	25	u			15				4.0	5000	H	18/22
	2N2373			SPE	0.15	A	15	O	0.1	20	25	u			15				2.5	5000	H	18/22
	2N2374			GPA	0.25	A	35	S		100	100	m										
	2N2375			GPA	0.25	A	35	S		35	100	m										
	2N2376	2N1193		GPA	0.25	A	35	S		35	100	m										
	2N2377	2N3250		SPA	0.15	A	25	O	0.05	10	5.0	m	32	T	12							18/22
	2N2378			SPA	0.15	A	10	O	0.05	15	15	m	6.0	T	12							18/22
D	2N2379			GPG	150	C	80	S	15	25	5.0	A	0.1	E		*30K/60K*		*1.0*		*15*	*A*	
	2N2380	2N2193		SNG	0.6	A	40	O	0.5	20	150	m	100	T	14	*125/195*		*1.3*		*150*	*m*	5/
	2N2380A	2N2193		SNG	0.6	A	40	O	0.5	20	150	m	100	T	14	*125/195*		*1.3*		*150*	*m*	5/
★	2N2381		1	GPS	0.3	A	15	O	0.5	40	200	m	300	T	6.0	*22/45*		*.40*		*200*	*m*	5/31
★	2N2382		1	GPS	0.3	A	20	O	0.5	40	200	m	300	T	6.0	*22/45*		*.40*		*200*	*m*	5/31
	2N2383	2N4914		SNA	85	C	60	O	5.0	20	1.5	A	0.6	E				*1.0*		*1.5*	*A*	53/
	2N2384	2N4914		SNA	85	C	60	O	5.0	20	1.5	A	0.6	E				*1.0*		*1.5*	*A*	
	2N2386,A			FET	Table 9																	
	2N2388			SNE	0.3	A	45	O	0.03	100	10	u	30	T	8.0				3.0	AUD		
	2N2389	2N2193		SNE	0.45	A	50	R	0.5	40	150	m	60	T	25				12	1000	H	
	2N2390	2N3019		SNE	0.45	A	50	R	0.5	100	150	m	70	T	25				8.0	1000	H	
D	2N2391	2N3250		SPA	0.3	A	20	O	0.05	15	10	m	140	T	5.0			*.6*		*10*	*m*	
D	2N2392	2N3250		SPA	0.3	A	20	O	0.05	30	10	m	140	T	5.0							
	2N2393	2N2905		SPA	0.45	A	35	O	0.3	20	150	m	50	T	45			*1.5*		*150*	*m*	
	2N2394	2N2905		SPA	0.45	A	35	O	0.3	30	150	m	60	T	45			*1.5*		*150*	*m*	
	2N2395	2N2219		SNA	0.45	A	40	O		20	150	m	40	T				*1.0*		*150*	*m*	
	2N2396	2N2219		SNA	0.45	A	40	O		40	150	m	50	T				*1.0*		*150*	*m*	
D	2N2397	2N2369A		SNS	0.3	A	15	O	0.2	25	10	m	200	T	2.5	*25/45*		*.30*		*10*	*m*	51/
	2N2398	2N3284		GPF	0.06	A	20	S	0.05	10	2.0	m			1.3				4.5	200	M	12/
	2N2399	2N3284		GPF	0.06	A	20	S	0.05	10	2.0	m			1.3				9.0	200	M	12/
	2N2400	2N964		GPG	0.15	A	7	O	0.1	30	10	m	150	T	4.0	*75/270*		*.22*		*10*	*m*	18/
	2N2401	2N964		GPG	0.15	A	10	O	0.1	50	10	m	200	T	4.0	*75/230*		*.2*		*10*	*m*	18/
	2N2402	2N2956		GPG	0.15	A	12	O	0.1	60	10	m	250	T	4.0	*75/200*		*.2*		*10*	*m*	18/
D	2N2403			SNS	1.0	A	60	O	1.0	20	0.6	A	147	T	25	*25/25*		*1.5*		*.6*	*A*	5/
D	2N2404			SNS	1.0	A	60	O	1.0	40	0.6	A	147	T	25	*25/25*		*1.5*		*.6*	*A*	5/
★	2N2405			SNA	5.0	C	90	O	1.0	60	150	m			15			*.5*		*150*	*m*	5/31
	2N2410	2N5859		SNG	0.8	A	30	O	0.8	30	10	m	200	T	11	*65/65*						5/31
	2N2411			SPG	0.3	A	20	O	0.1	20	10	m	140	T	5.0	*25/100*		*.2*		*10*	*m*	18/
	2N2412			SPG	0.3	A	20	O	0.1	40	10	m	140	T	5.0	*25/100*		*.2*		*10*	*m*	18/
	2N2413	2N2221		SNA	0.3	A	18	O	0.2	30	10	m	300	T	5.0			*.4*		*10*	*m*	18/
	2N2414			SNA	0.5	A	40	R	0.5	50	10	m	50	T	25			*1.2*		*50*	*m*	
★	2N2415			GPF	.075	A	10	O	0.02	10	2.0	m	500	T	2.0				3.0	200	M	72/20
★	2N2416			GPF	.075	A	10	O	0.02	8.0	2.0	m	400	T	2.0				4.0	200	M	72/20
	2N2417	THRU		UJT	Table 8																	
	2N2422B			UJT	Table 8																	
	2N2423			GPG	90	C	80	V	5.0	20	2.0	A	0.6	E		*45K/35K*		*1.5*		*5.0*	*A*	3/
	2N2424	2N3250		SPG	.375	A	5	O	0.05	30	5.0	m	12	B	14	*300/500*		*.3*		*15*	*m*	5/
	2N2425	2N3250A		SPA	.375	A	10	O	0.05	25	5.0	m	8.0	B	14			*.3*		*15*	*m*	5/31
D	2N2426			GNA	0.15	A	25	R	2.0						40			**35**		**1000**	**H**	5/
	2N2427			SNA	0.5	A	40	O	0.05	20	10	u	50	T								18/22
	2N2428	2N652		GPA	0.5	A	32	S	0.1	50	2.0	m	0.5	E								1/
	2N2429	2N652		GPA	0.5	A	32	S	0.1	65	2.0	m	0.65	E								1/
	2N2430			GNA	0.28	A	32	R	0.3	60	0.1	A	0.6	E								1/
	2N2431			GPA	0.55	A	32	R	1.0	60	0.3	A	0.6	E	80							1/
	2N2432			SNC	0.3	A	30	O	0.1	50	1.0	m	20	T	12			*.15*		*10*	*m*	18/22
	2N2432A			SNC	0.3	A	45	O	0.1	50	1.0	m	20	T	12							18/
	2N2433	2N2193		SNE	0.5	A	45	O	1.0	40	150	m	80	T	20				6.0	1000	H	46/
	2N2434			SNE	0.5	A	45	O	1.0	100	150	m	90	T	20				6.0	1000	H	46/
	2N2435	2N3020		SNE	0.5	A	80	O	0.5	40	150	m	80	T	15				6.0	1000	H	46/
	2N2436	2N3019		SNE	0.5	A	80	O	0.5	100	150	m	90	T	15				6.0	1000	H	46/
	2N2437	2N3020		SNE	0.5	A	75	O	0.5	15	10	m	70	T	15	*/6.0*			6.0	1000	H	46/
	2N2438	2N5859		SNE	0.5	A	75	O	0.5	35	10	m	80	T	15				6.0	1000	H	46/
	2N2439	2N3019		SNE	0.5	A	75	O	0.5	75	10	m	90	T	15				6.0	1000	H	46/
	2N2440	2N3019		SNE	0.3	A	80	O	0.5	100	150	m	90	T	15				6.0	1000	H	5/
	2N2443	2N3500		SNE	0.8	A	100	O		50	50	m	50	T	15				15	1000	H	5/31

	TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF @ f dB Max		Unit	PACKAGE To-Case No.	No.
																t_{on} ns Max	t_{off} ns Max	$V_{CE(sat)}$ Volts Max	@ $\frac{I_C}{I_B}$	& I_C			
	2N2444			GPA	85	C	80	O	10	90	3.0	A	4.5	T				1.0		5.0	A	3/	
	2N2445			GPA	90	C	50	O	15	30	10	A	0.1	T				1.0		10	A	4/	
D	2N2446			GPG	90	C	50	S	7.0	15	5.0	A	0.045	E			30K/35K	1.5		7.0	A	3/	
D	2N2447	2N1187		GPA	.075	A	24	O	0.1														
D	2N2448	2N1187		GPA	.075	A	24	O	0.1														
D	2N2449	2N652		GPA	.075	A	20	O	0.1														
D	2N2450	2N652		GPA	.075	A	20	O	0.1														
★	2N2452			OPT	Table 10																		
★	2N2453			SNM	0.5	A	30	O	0.2	80	10	u	60	T	8.0		/3.0			1000	H	78/654	
★	2N2453A		1	SNM	0.5	A	50	O	0.2	80	10	u	60	T			/3.0			1000	H	78/654	
D	2N2454			THY	Table 6																		
D	2N2456			GPG	0.15	A	15	S	0.2	20	2.0	m	1000	T	3.0		15/65	.19		10	m	18/22	
	2N2459			SNA	0.4	A	60	O	0.05	10	0.1	m	100	T	5.0			.3		10	m	46/	
	2N2460			SNA	0.4	A	60	O	0.05	20	0.1	m	120	T	5.0			.3		10	m	46/	
	2N2461			SNA	0.4	A	60	O	0.05	40	0.1	m	140	T	5.0			.3		10	m	46/	
	2N2463			SNA	0.5	A	60	O	0.05	10	0.1	m	100	T	5.0			.3		10	m	18/22	
	2N2464			SNA	0.5	A	60	O	0.05	20	0.1	m	120	T	5.0			.3		10	m	18/22	
	2N2465			SNA	0.5	A	60	O	0.05	40	0.1	m	140	T	5.0			.3		10	m	18/22	
	2N2466			SNA	0.5	A	60	O	0.05	60	0.1	m	160	T	5.0			.3		10	m	18/22	
D	2N2467			GPA	5.0	C	30	O	3.0	30	0.5	A	20	T				.4		1.0	A		
D	2N2468			GPA	5.0	C	60	O	3.0	30	0.5	A	20	T				.4		1.0	A		
D	2N2469			GPA	5.0	C	100	O	3.0	30	0.5	A	20	T				.4		1.0	A		
D	2N2472	2N3500		SNA	1.0	A	100	O	1.0	30	0.2	A	10	T	75			1.7		.2	A		
D	2N2473	2N3500		SNA	1.0	A	100	O	1.0	30	0.2	A	10	T	75			1.7		.2	A		
	2N2474			SPA	0.25	A	15	O	0.05	8.0	100	u						.12		10	m	5/31	
	2N2475	2N835		SNS	0.3	A	6.0	O		20	50	m	600	T	3.0		20/15					5/31	
	2N2476	2N5859	1	SNS	2.0	C	20	O		20	150	m	250	T	10		25/45	.4		150	m	5/31	
	2N2477	2N5859	1	SNS	2.0	C	20	O		40	150	m	250	T	10		25/45	.4		150	m	5/31	
	2N2478	2N2218		SNG	0.6	A	40	O	0.5	30	150	m	200	T	12		80/185	.7		150	m	5/31	
	2N2479	2N2218		SNG	0.6	A	40	O	0.5	30	150	m	150	T	14		100/185	.85		150	m	5/31	
★	2N2480		1	SNM	0.3	A	40	O	0.5	30	1.0	m	50	T	20			1.3		50	m	78/654	
★	2N2480A		1	SNM	0.3	A	40	O	0.5	50	1.0	m	50	T	18					1000	H	78/654	
★	2N2481		1	SNS	1.2	C	15	O	0.5	40	10	m	300	T	5.0		40/55	.25		10	m	18/22	
D	2N2482			GNA	0.15	A	15	S	0.1	25	2.0	m	600	T	4.5							18/22	
★	2N2483	MM2483		SNE	0.36	A	60	O	0.05	40	10	u	12	T	6.0				3.0	10	K	18/22	
★	2N2484	MM2484	1	SNE	0.36	A	60	O	0.05	100	10	u	15	T	6.0				2.0	10	K	18/22	
	2N2484A			SNE	0.36	A	60	O	0.05	100	10	u	60	T	6.0				3.0	1000	H	18/22	
D	2N2485			SNA	8.8	C	120	O	1.0	10	0.5	A	100	T	12							5/31	
D	2N2486			SNA	8.8	C	140	O	1.0	10	0.5	A	100	T	12							5/31	
	2N2487			GPA	0.06	A	10	O	0.1	20	10	m	360	T	3.0			.17		40	m	18/22	
	2N2488			GPA	0.06	A	10	O	0.1	20	50	m	360	T	3.0			.17		15	m	18/22	
	2N2489			GPA	0.06	A	15	O	0.1	20	10	m	300	T	3.0			.18		10	m	18/22	
★	2N2490		1	GPS	170	C	60	S	15	20	5.0	A	0.1	E			25/15	.7		12	A	36/5	
★	2N2491		1	GPS	170	C	50	S	15	35	5.0	A	0.175	E			25/15	.7		12	A	36/5	
★	2N2492		1	GPS	170	C	70	S	15	25	5.0	A	0.125	E			25/15	.5		12	A	36/5	
★	2N2493		1	GPS	170	C	85	S	15	25	5.0	A	0.125	E			25/15	.5		12	A	36/5	
	2N2494			GPF	.083	A	20	V	0.01	25	1.0	m			2.0			10	7.5	200	M	7/	
	2N2495			GPF	.125	A	40	S	0.01	25	1.0	m			200			10	7.5	200	M	12/	
	2N2496			GPF	0.1	A	20	V	0.01	25	1.0	m			2.0			10	7.5	200	M		
	2N2497			FET	Table 9																		
★	2N2500			FET	Table 9																		
★	2N2501		1	SNA	0.36	A	20	O		50	10	m	350	T	4.0			.2		10	m	18/22	
	2N2503	THRU		THY	Table 6																		
	2N2508			THY	Table 6																		
	2N2509			SNE	1.2	C	80	O	0.2	25	10	u	45	T	6.0				7.0	1000	H	18/22	
	2N2511			SNA	1.2	C	50	O	0.2	240	10	m	45	T	6.0			1.0		5.0	m	18/22	
D	2N2512			GPA	0.15	A	70	R	0.03	20	1.0	m	140	T	5.0							33/	
	2N2514			SNA	0.4	A	60	O	0.1	15	5.0	m	30	T	6.0			.5		10	m	46/	
	2N2515			SNA	0.4	A	60	O	0.1	30	5.0	m	60	T	6.0			.5		10	m	46/	
	2N2516			SNA	0.4	A	60	O	0.1	60	5.0	m	100	T	6.0			.5		10	m	46/	
	2N2517			SNA	0.4	A	80	O	0.05	15	5.0	m	30	T	6.0			.5		10	m	46/	
	2N2518			SNA	0.4	A	80	O	0.05	30	5.0	m	60	T	6.0			.5		10	m	46/	
	2N2519			SNA	0.4	A	80	O	0.05	60	5.0	m	100	T	6.0			.5		10	m	46/	
	2N2520			SNA	0.4	A	60	O	0.1	12	1.0	m	40	B	6.0			.5		10	m	46/	
	2N2521			SNA	0.4	A	60	O	0.1	25	1.0	m	40	B	6.0			.5		10	m	46/	
	2N2522			SNA	0.4	A	60	O	0.1	50	1.0	m	40	B	6.0			.5		10	m	46/	
	2N2523			SNE	0.4	A	45	O	0.03	40	10	u	45	T	6.0				4.0	10	K	46/	
	2N2524			SNE	0.4	A	45	O	0.03	100	10	u	45	T	6.0				3.0	10	K	46/	
	2N2525			SNA	25	C	80	O	1.0	10	.35	A	56	T	25			.8		1.0	A	3/	
★	2N2526		1	GPG	85	C	80	O	10	20	3.0	A	0.03	T			11K/9K	.8		10	A	3/	

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min	NF dB Max	@ f / $V_{CE(sat)}$ Volts Max @ I_C/I_B & I_C	Unit	PACKAGE To-Case No. No.
★ 2N2527		1	GPG	85	C	120	O	10	20	3.0 A	0.03	T		*11K/9K*			.8		*10 A*	3/
★ 2N2528			GPG	85	C	160	O	10	20	3.0 A	0.03	T		*11K/9K*			.8		*10 A*	/184
D 2N2529	2N929		SNE	0.15	A	40	O	.025	10	1.0 m	4.8	B	3.0					30	1000 H	18/22
D 2N2530	2N929		SNE	0.15	A	40	O	.025	12	1.0 m	8.0	B	3.0				2.0	30	1000 H	18/
D 2N2531	2N929		SNE	0.15	A	40	O	.025	20	1.0 m	9.6	B	3.0				2.0	30	1000 H	18/
D 2N2532	2N929		SNE	0.15	A	40	O	.025	45	1.0 m	12.8	B	3.0				2.0	30	1000 H	18/
D 2N2533	2N929		SNE	0.15	A	40	O	.025	20	10 m	8.0	B	3.0				1.5	30	1000 H	18/
D 2N2534	2N929		SNE	0.15	A	40	O	.025	45	10 m	16	B	3.0				1.5	30	1000 H	18/
D 2N2535			GPA	10	C	30	O		40	0.4 A	0.32	E					.5		*1.0 A*	
D 2N2536			GPA	10	C	40	O		40	0.4 A	0.32	E					.5		*1.0 A*	
2N2537	2N5859		SNS	0.8	A	30	O	0.8	50	150 m	250	T	8.0	*40/40*			.2		*10 m*	5/31
★ 2N2538			SNS	0.8	A	30	O	0.8	100	150 m	250	T	8.0	*40/40*			.45		*150 m*	5/31
★ 2N2539		1	SNS	0.5	A	30	O	0.8	50	150 m	250	T	8.0	*40/40*			.45		*150 m*	18/22
★ 2N2540		1	SNS	0.5	A	30	O	0.8	100	150 m	250	T	8.0	*40/40*			.45		*150 m*	18/22
2N2541			GPA	.215	A	14	O	1.0	60	50 m	8.0	B	20				.25		*50 m*	5/
2N2542	THRU		THY	Table 6																
2N2550			THY	Table 6																
2N2551			SPE	0.4	A	150	O		15	0.1 A								6.0	1000 H	5/
★ 2N2552		1	GPA	20	C	40	V	3.0	20	1.0 A	0.225	T					.25		*1.0 A*	
★ 2N2553		1	GPA	20	C	60	V	3.0	20	1.0 A	0.225	T					.25		*1.0 A*	
★ 2N2554		1	GPA	20	C	80	V	3.0	20	1.0 A	0.225	T					.25		*1.0 A*	
★ 2N2555		1	GPA	20	C	100	V	3.0	20	1.0 A	0.225	T					.25		*1.0 A*	
★ 2N2556		1	GPA	20	C	40	V	3.0	20	1.0 A	0.225	T					.25		*1.0 A*	
★ 2N2557		1	GPA	20	C	60	V	3.0	20	1.0 A	0.225	T					.25		*1.0 A*	
★ 2N2558		1	GPA	20	C	80	V	3.0	20	1.0 A	0.225	T					.25		*1.0 A*	
★ 2N2559		1	GPA	20	C	100	V	3.0	20	1.0 A	0.225	T					.25		*1. A*	
★ 2N2560		1	GPA	20	C	40	V	3.5	20	3.0 A	0.25	T					.75		*3.0 A*	/183
★ 2N2561		1	GPA	20	C	60	V	3.5	20	3.0 A	0.25	T					.75		*3.0 A*	/183
★ 2N2562		1	GPA	20	C	80	V	3.5	20	3.0 A	0.25	T					.75		*3.0 A*	/183
★ 2N2563		1	GPA	20	C	100	V	3.5	20	3.0 A	0.25	T					.75		*3.0 A*	/183
★ 2N2564		1	GPA	20	C	40	V	3.5	20	3.0 A	0.25	T					.75		*3.0 A*	/180
★ 2N2565		1	GPA	20	C	60	V	3.5	20	3.0 A	0.25	T					.75		*3.0 A*	/180
★ 2N2566		1	GPA	20	C	80	V	3.5	20	3.0 A	0.25	T					.75		*3.0 A*	/180
★ 2N2567			GPA	20	C	100	V	3.5	20	3.0 A	0.25	T					.75		*3.0 A*	/180
D 2N2568			GNP	1.0	C	32	S	0.1	10	40 m	600	T	3.0				10		400 M	
2N2569			SNC	0.3	A	5	O	0.5	50	100 u	100	T	10							18/
2N2570			SNC	0.3	A	5	O	0.5	50	100 u	100	T	10							18/
D 2N2571			SNC	0.3	A	15	O	0.5	50	100 m	100	T	10							18/
D 2N2572			SNC	0.3	A	15	O	0.5	50	100 m	100		10							18/
2N2573	THRU		THY	Table 6																
2N2579			THY	Table 6																
2N2580			SNG	150	C	400	O	10	10	5.0 A	2.0	T		*2500/3000*			.7		*5.0 A*	36/
2N2581			SNG	150	C	400	O	10	25	5.0 A	2.0	T		*2500/3000*			*1.0*		*10 A*	36/
2N2582			SNG	150	C	500	O	10	10	5.0 A	2.0	T		*2500/3000*			.7		*5.0 A*	36/
2N2583			SNG	150	C	500	O	10	25	5.0 A	2.0	T		*2500/3000*			*1.0*		*10 A*	36/
2N2584			SNA	150	C	600	O		10	5.0 A	0.3	E					.7		*5.0 A*	
2N2585			SNA	150	C	600	O		25	5.0 A	0.75	E					*1.0*		*10 A*	
2N2586			SNA	0.3	A	45	O		120	10 u							.5		*10 m*	
D 2N2587			GPF	0.15	A	30	S	0.1	15	8.0 m	1000	T	3.0					6.0	4 M	18/
D 2N2588			GPF	0.15	A	20	O	0.03	50	1.5 m	75	T	2.5				13	10	50 M	
D 2N2589			SNG	150	C	150	O	7.0	17	7.0 A	0.25	T		*1500/5000*			*1.0*		*7.0 A*	
2N2590			SPA	0.4	A	60	O	0.05	10	0.1 m	50	T	5.0				.4		*10 m*	46/
2N2591			SPA	0.4	A	60	O	0.05	20	0.1 m	70	T	5.0				.4		*10 m*	46/
2N2592			SPA	0.4	A	60	O	0.05	40	0.1 m	90	T	5.0				.4		*10 m*	46/
2N2593			SPA	0.4	A	60	O	0.05	60	0.1 m	110	T	5.0				.4		*10 m*	46/
2N2594	2N5336		SNA	5.0	C	90	R	1.0	50	100 m	40	T	20				*1.0*		*200 m*	5/
2N2595	2N3496		SPA	0.4	A	60	O	0.05	15	5.0 m	30	T	6.0				.5		*10 m*	46/
2N2597	2N3496		SPA	0.4	A	60	O	0.05	60	5.0 m	60	T	6.0				.5		*10 m*	46/
2N2598			THY	Table 6																
2N2599	2N3497		SPA	0.4	A	80	O	0.05	30	5.0 m	40	T	6.0				.5		*10 m*	46/
2N2599A	2N3497		SPA	0.4	A	100	O	0.05	30	5.0 m	40	T	6.0				.5		*10 m*	46/
2N2600	2N3497		SPA	0.4	A	80	O	0.05	60	5.0 m	60	T	6.0				.5		*10 m*	46/
2N2600A	2N3497		SPA	0.4	A	100	O	0.05	60	5.0 m	60	T	6.0				.5		*10 m*	46/
2N2601	2N3798		SPA	0.4	A	60	O	0.05	12	1.0 m	20	T	6.0				.5		*10 m*	46/
2N2602	2N3798		SPA	0.4	A	60	O	0.05	25	1.0 m	40	T	6.0				.5		*10 m*	46/
2N2603	2N3799		SPA	0.4	A	60	O	0.05	50	1.0 m	60	T	6.0				.5		*10 m*	46/
2N2604			SPA	0.4	A	45	O	0.03	40	10 u	30	T	6.0				.5		*10 m*	46/
2N2605	2N3798		SPA	0.4	A	45	O	0.03	100	10 u	30	T	6.0				.5		*10 m*	46/
2N2605A			SPA	0.4	A	45	O	0.03	50	1.0 u	45	T	6.0				.25		*10 m*	46/
2N2606			FET	Table 9																

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / @ I_C / I_B	& I_C	Unit	PACKAGE To-Case No. No.
2N2609			FET	Table 9																	
2N2610	2N929		SNA	0.15 A		40	O										1.0		5.0	m	
2N2611	2N3766		SNA	2.0 A		100	O	1.0	7.0	0.2 A		4.0	T	75			1.7		.2	A	
2N2612	2N1559		GPA	75 C		65	V	15	85	10 A							1.0		10	A	3/
2N2613	2N1193		GPE	0.12 A		25	R	0.05				3.2	B					4.0	1000	H	1/
2N2615A			THY	Table 6																	
2N2616	2N1559		SNF	3.0 A		15	O	0.05	20	3.0 m		600	T	2.8			15	6.0	200	M	18/
2N2617	2N3250		SPF	0.25 A				0.1	15	20 m							15	6.0	200	M	18/
D 2N2618	2N2219		SNA	0.6 A		40	O	0.75	25	10 m		200	T	14							5/
D 2N2619			THY	Table 6																	
D 2N2620			FET	Table 9																	
D 2N2621			GPA	0.15 A		15	S	0.1	15	1.0 m		13	T	3.5							5/
D 2N2622			GPA	0.15 A		24	S	0.1	15	1.0 m		15	T	3.5							5/
D 2N2623			GPA	0.15 A		32	S	0.1	20	1.0 m		16	T	3.5							5/
D 2N2624			GPA	0.15 A		15	S	0.1	20	1.0 m		13	T	3.5							5/
2N2626			GPA	0.15 A		32	S	0.1	20	1.0 m		16	T	3.5							5/
2N2627			GPA	0.15 A		15	S	0.1	15	1.0 m		13	T	3.5							5/
2N2628			GPA	0.15 A		24	S	0.1	15	1.0 m		15	T	3.5							5/
D 2N2629			GPA	0.15 A		32	S	0.1	10	1.0 m		16	T	3.5							5/
2N2630			GPA	0.3 A		10	O	0.1	25	100 m		300	T	4.0			.45		100	m	18/
2N2631	2N3553		SNA	8.75 C		80	V	1.5	8.0	200 m				20							
2N2632	2N5477		SNS	40 C		60	O	5.0	40	1.0 A		20	T	150	80/140		.25		1.0	A	
2N2633	2N5477		SNS	40 C		80	O	5.0	40	1.0 A		20	T	150	80/140		.25		1.0	A	
2N2634	2N5479		SNS	40 C		100	O	5.0	40	1.0 A		20	T	150	80/140		.25		1.0	A	
★ 2N2635		1	GPG	0.15 A		12	O	0.1	45	50 m		150	T	5.0	50/250		.2		10	m	18/22
2N2636			GPG	100 C		60	O	25	20	25 A		0.6	T		700/7500		.65		25	A	41/
2N2637			GPG	100 C		60	O	25	20	25 A		0.6	T		700/7500		.65		25	A	41/
2N2638			GPG	100 C		60	O	25	20	25 A		0.6	T		700/7000		.65		25	A	41/
★ 2N2639		1	**SNM**	0.3 A		45	O	0.03	50	10 u		35	T	8.0	/10				**AUD**		78/654
★ 2N2640		1	**SNM**	0.3 A		45	O	0.03	50	10 u		35	T	8.0	/20				**AUD**		78/654
★ 2N2641		1	**SNA**	0.3 A		45	O	0.03	50	10 u		35	T	8.0				4.0	**AUD**		78/654
★ 2N2642		1	**SNM**	0.3 A		45	O	0.03	100	10 u		35	T	8.0	/10				**AUD**		8/654
★ 2N2643		1	**SNA**	0.3 A		45	O	0.03	100	10 u		35	T	8.0	0.8/20			4.0	**AUD**		78/654
★ 2N2644			**SNA**	0.3 A		45	O	0.03	100	10 u		35	T	8.0				4.0	**AUD**		78/654
2N2645			**SNA**	0.5 A		50	R		100	150 m		50	T	25				2.5	**10**	K	18/
2N2646			UJT	Table 8																	
2N2647			UJT	Table 8																	
2N2648			GPG	5.0 C		10	O	1.0	80	1.0 A		10	T		300/1400		.4		1.0	A	5/
D 2N2649			SNA	8.7 C		65	O	1.0	10	0.5 A		100	T	12							5/
D 2N2650			SNA	8.7 G		140	O	1.0	10	0.5 A		100	T	12							5/
2N2651			SNE	0.36 A		20	O	0.5	25	10 m		350	T	4.0	35/75			80	1000	H	18/
★ 2N2652		1	**SNM**	0.3 A		60	O	0.5	50	1.0 m		60	T	15	/10		1.2		50	m	78/654
★ 2N2652A		1	**SNM**	0.3 A		60	O	0.5	50	1.0 m		60	T	15					1000	H	78/654
2N2653			THY	Table 6																	
D 2N2655	2N5681		SNA	15 C		100	O	0.5	30	0.2 A		0.25	T				2.0		.2	A	5/
D 2N2656	2N2222		SNH	0.36 A		15	O	0.2	40	0.1 m		250	T	5.0			10		100	M	18/
★ 2N2656S	2N2222		SNH	0.36 A		15	O	0.2	40	0.1 m		250	T	5.0			10		100	M	18/
2N2657	2N5336		SNG	1.25 A		60	O	5.0	40	1.0 A		20	T		100/1500		.5		1.0	A	5/
2N2657S	2N5336		SNG	1.25 A		60	O	5.0	40	1.0 A		20	T		100/1500		.5		1.0	A	39/
2N2658	2N5336		SNG	1.25 A		80	O	5.0	40	1.0 A		20	T		100/1500		.5		1.0	A	5/
2N2659			GPA	15 C		50	V	3.0	30	500 m		0.28	T				.5		500	m	
2N2660			GPA	15 C		70	V	3.0	30	500 m		0.28	T				.5		500	m	
2N2661			GPA	15 C		90	V	3.0	30	500 m		0.28	T				.5		500	m	
2N2662			GPA	15 C		50	V	3.0	30	500 m		0.28	T				.5		500	m	
2N2663			GPA	15 C		70	V	3.0	30	500 m		0.28	T				.5		500	m	
2N2664			GPA	15 C		90	V	3.0	30	500 m		0.28	T				.5		500	m	
2N2665			GPA	15 C		50	V	3.0	50	500 m		0.3	T				.5		500	m	
2N2666			GPA	15 C		70	V	3.0	50	500 m		0.3	T				.5		500	m	
2N2667			GPA	15 C		90	V	3.0	50	500 m		0.3	T				.5		500	m	
2N2668			GPA	15 C		50	V	3.0	50	500 m		0.3	T				.5		500	m	
2N2669			GPA	15 C		70	V	3.0	50	500 m		0.3	T				.5		500	m	
2N2670			GPA	15 C		70	V	3.0	50	500 m		0.3	T				.5		500	m	
D 2N2671			GPA	0.1 A		25	B	0.01	40	1.0 m		200	T	2.5							12/
D 2N2672			GPA	0.1 A		25	B	0.01	40	1.0 m		18	T	2.5							39/
D 2N2672A			GPA	0.1 A		32	S	0.01	40	1.0 m											39/
D 2N2673	2N2222A		SNE	0.25 A		45	O	.025	8.0	1.0 m		2.0	B	4.0			1.5	30	1000	H	46/
D 2N2674	2N2222A		SNE	0.25 A		45	O	.025	12	1.0 m		4.0	B	4.0				30	1000	H	46/
D 2N2675	2N2222A		SNE	0.25 A		45	O	.025	22	1.0 m		8.0	B	4.0				30	1000	H	46/
D 2N2676	2N2222A		SNE	0.25 A		45	O	.025	45	1.0 m		8.0	B	4.0				30	1000	H	46/
D 2N2677	2N2221A		SNE	0.25 A		35	O	.025	20	1.0 m		8.0	B	3.0				30	1000	H	46/

	TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min	NF dB Max @ V_{CE} (sat) Volts Max	@ I_C / I_B	& f I_C	Unit	PACKAGE To-Case No.	No.
D	2N2678	2N2221A		SNE	0.25	A	35	O	.025	45	1.0 m	16	B	3.0					30	1000	H		46/
	2N2679	THRU		THY	Table 6																		
	2N2690			THY	Table 6																		
	2N2691			GPA	100	C	80	O	20	30	20 A	6.0	T					.65		20	A		41/
	2N2691A			GPA	170	C	80	O		50	20 m												
	2N2692	2N929		SNE	0.3	A	30	O	0.05	90	100 u	42	T	5.0					5.0	1000	H		18/
	2N2693	2N929		SNG	0.3	A	30	O	0.03	40	10 u	42	T	5.0	700/1900			.12		100	u		18/
	2N2694	2N929		SNG	0.3	A	20	O	0.03	20	10 u	42	T	5.0	1200/3100			.12		100	u		18/
	2N2695	2N3673		SPG	0.36	A	25	O	0.5	30	50 m	100	T	20	75/170			.25		50	m		46/
	2N2696	2N2907		SPG	0.36	A	25	O	0.5	30	50 m	100	T	20	75/170			.25		50	m		18/22
	2N2697	2N5478		SNG	18	C	60	O	5.0	40	1.0 A	20	T		100/1500			.5		1.0	A		
	2N2698	2N5478		SNG	18	C	80	O	5.0	40	1.0 A	20	T		100/1500			.5		1.0	A		
D	2N2699	2N964		GPG	0.15	A	8	O	0.1	40	10 m	300	T	3.5	45/80			.18		10	m		1/
	2N2706			GPA	0.5	A	32	S	0.2	65	20 m	1.04	B										
	2N2707			GA																			
	2N2708			SNF	0.2	A	20	O	0.05	30	2.0 m	700	T	1.5				15	7.5	200	M		20/
D	2N2709	2N2800		SPE	0.24	A	35	O	0.5	10	0.2 m	0.16	B	110					30	1000	H		5/
	2N2710	2N3014	1	SNS	0.36	A	20	O	0.5	40	10 m	500	T	4.0	20/35			.25		10	m		18/22
	2N2711	MPS2711	1	SNA	0.2	A	18	O	0.1	30	2.0 m			4.5									92/
	2N2712	MPS2712		SNA	0.2	A	18	O	0.1	75	2.0 m			4.5									92/
	2N2713	MPS2713		SNA	0.2	A	18	O	0.2	30	2.0 m							.3		50	m		92/
	2N2714	MPS2714		SNA	0.2	A	18	O	0.2	75	2.0 m							.3		50	m		92/
	2N2715			SNA	0.2	A	18	O	0.05	30	2.0 m			5.0									92/
	2N2716			SNA	0.2	A	18	O	0.05	75	2.0 m			5.0									92/
	2N2717			GPG	0.1	A	15	O	0.03	50	30 m	300	T	5.0	75/115			.35		10	m		18/
D	2N2718			GPG	0.24	A	12	O	0.4	25	170 m	150	T	10	100/250			.27		150	m		5/
D	2N2719			SNA	0.3	A	8	O	0.2	30	60 m	200	T	6.0				.40		60	m		18/22
★	2N2720		1	SNM	0.3	A	60	O	0.04	30	0.1 m	80	T	6.0	/5.0			1.0		10	m		78/654
★	2N2721			SNM	0.3	A	60	O	0.04	30	0.1 m	80	T	6.0	/10			1.0		10	m		78/654
★	2N2722		1	SNA	0.3	A	45	O	0.04	50	1.0 u	100	T	6.0	0.9/5.0			1.0	4.0	10	m		78/654
★	2N2723		1	SNE	0.5	A	60	O	0.04	2K	10 m	100	T	10					10	1000	H		72/20
	2N2724	2N2723		SNA	0.5	A	60	O	0.04	7K	10 m	100	T	10				1.0		10	m		
	2N2725	2N2723		SNE	0.5	A	45	O	0.03	2K	0.1 m	100	T	10					6.0	1000	H		72/20
	2N2726	2N3440		SNA	1.0	A	200	R	0.5	30	0.2 A	15	T					2.0		.2	A		5/
	2N2727			SNA	1.0	A	200	R	0.5	75	0.2 A	15	T					2.0		.2	A		5/
	2N2728		1	GPA	170	C	5	O	0.05	40	20 A	0.12	E					.1		50	A		36/7
	2N2729			SNH	0.3	A	15	O	0.05	20	3.0 m	600	T	2.8				15		200	M		46/
	2N2730	MP506		GPA	170	C	60	O	65	30	25 A	0.2	T					.25		25	A		36/
	2N2731	2N2221		GPA	170	C	45	O	65	30	25 A	0.2	T					.25		25	A		36/
	2N2732	MP504		GPA	170	C	30	O	65	30	25 A	0.2	T					.25		25	A		36/
	2N2733	MP506		GPA	140	C	60	O	65	30	25 A	0.2	T					.25		25	A		36/
D	2N2734	MP505		GPA	140	C	45	O	65	30	25 A	0.2	T					.25		25	A		36/
	2N2735	2N720A		GPA	140	C	30	O	65	30	25 A	0.2	T					.25		25	A		36/
★	2N2736	MP506		GPA	140	C	60	O	65	30	25 A	0.2	T					.25		25	A		36/
	2N2737	MP505		GPA	140	C	45	O	65	30	25 A	0.2	T					.25		25	A		36/
	2N2738	MP504		GPA	140	C	30	O	65	30	25 A	0.2	T					.25		25	A		36/
	2N2739	2N740		SNG	200	C	50	V	20	10	10 A				10K/20K			1.5		10	A		
★	2N2740	2N5629		SNG	200	C	100	V	20	10	10 A				10K/20K			1.5		10	A		
	2N2741	2N5631		SNG	200	C	150	V	20	10	10 A				10K/20K			1.5		10	A		
	2N2742			SNG	200	C	200	V	20	10	10 A				10K/20K			1.5		10	A		
	2N2743	2N706		SNG	200	C	250	V	20	10	10 A				10K/20K			1.5		10	A		
	2N2744			SNG	200	C	300	V	20	10	10 A				10K/20K			1.5		10	A		
	2N2745	2N5885		SNG	200	C	50	V	20	10	15 A				12K/21K			1.5		15	A		
	2N2746	2N5886		SNG	200	C	100	V	20	10	15 A				12K/21K			1.5		15	A		
	2N2747			SNG	200	C	150	V	20	10	15 A				12K/21K			1.5		15	A		
	2N2748			SNG	200	C	200	V	20	10	15 A				12K/21K			1.5		15	A		
	2N2749			SNG	200	C	250	V	20	10	15 A				12K/21K			1.5		15	A		
	2N2750			SNG	200	C	300	V	20	10	15 A				12K/21K			1.5		15	A		
	2N2751	2N5685		SNG	200	C	50	V	20	10	20 A				13K/22K			1.5		20	A		
	2N2752	2N5686		SNG	200	C	100	V	20	10	20 A				13K/22K			1.5		20	A		
★	2N2753			SNG	200	C	150	V	20	10	20 A				13K/22K			1.5		20	A		
	2N2754			SNG	200	C	200	V	20	10	20 A				13K/22K			1.5		20	A		
	2N2755			SNG	200	C	250	V	20	10	20 A				13K/22K			1.5		20	A		
	2N2756			SNG	200	C	300	V	20	10	20 A				13K/22K			1.5		20	A		
	2N2757			SNG	200	C	50	V	30	10	10 A				10K/20K			1.5		10	A		
	2N2758			SNG	200	C	100	V	30	10	10 A				10K/20K			1.5		10	A		
	2N2759			SNG	200	C	150	V	30	10	10 A				10K/20K			1.5		10	A		
	2N2760			SNG	200	C	200	V	30	10	10 A				10K/20K			1.5		10	A		
	2N2761			SNG	200	C	250	V	30	10	10 A				10K/20K			1.5		70	A		
	2N2762			SNG	200	C	300	V	30	10	10 A				10K/20K			1.5		10	A		

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	t_{on} ns Max	ΔV_{BE} mV Max	t_{off} ns Max	Gp dB Min	$V_{CE(sat)}$ Volts @	I_C & I_B	NF @ f dB Max	I_C	Unit	PACKAGE To- No.	Case No.
2N2763			SNG	200	C	50	V	30	10	15	A					12K/21K			1.5				15	A		
2N2764			SNG	200	C	100	V	30	10	15	A					12K/21K			1.5				15	A		
2N2765			SNG	200	C	150	V	30	10	15	A					12K/21K			1.5				15	A		
2N2766			SNG	200	C	200	V	30	10	15	A					12K/21K			1.5				15	A		
2N2767			SNG	200	C	250	V	30	10	15	A					12K/21K			1.5				15	A		
2N2768			SNG	200	C	300	V	30	10	15	A					12K/21K			1.5				15	A		
2N2769			SNG	200	C	50	V	30	10	20	A					13K/22K			1.5				20	A		
2N2770			SNG	200	C	100	V	30	10	20	A					13K/22K			1.5				20	A		
2N2771			SNG	200	C	150	V	30	10	20	A					13K/22K			1.5				20	A		
2N2772			SNG	200	C	200	V	30	10	20	A					13K/22K			1.5				20	A		
2N2773			SNG	200	C	250	V	30	10	20	A					13K/22K			1.5				20	A		
2N2774			SNG	200	C	300	V	30	10	20	A					13K/22K			1.5				20	A		
2N2775			SNG	200	C	50	V	30	10	25	A					14K/23K			1.5				25	A		
2N2776			SNG	200	C	100	V	30	10	25	A					14K/23K			1.5				25	A		
2N2777			SNG	200	C	150	V	30	10	25	A					14K/23K			1.5				25	A		
2N2778			SNG	200	C	200	V	30	10	25	A					14K/23K			1.5				25	A		
2N2779			SNG	200	C	250	V	30	10	25	A					14K/23K			1.5				25	A		
2N2780			SNG	200	C	300	V	30	10	25	A					14K/23K			1.5				25	A		
2N2781			SNA	200	C	30	O	2.0	7.5	.35	A	75	T	40					5.0				1.0	A	8/	
2N2782			SNA	200	C	40	O	2.0	7.5	.35	A	75	T	40					5.0				1.0	A	8/	
2N2783			SNA	200	C	40	O	2.0	7.5	.35	A	75	T						5.0				1.0	A	8/	
2N2784			SNS	0.3	A	6	O		20	30	m	1000	T	3.0	9.0/9.0		.26						3.0	m	18/	
★ 2N2785		1	SNA	0.5	A	40	O		2K	0.1	A	10	T	30			1.0						15	m	72/20	
2N2786			GPH	1.5	C	20	O	0.15	33	0.1	A			5.0			10						80	M	39/	
2N2786A			GPA	1.5	C	20	O		33	0.1	A															
2N2787	2N2218S		SNS	0.8	A	35	O	0.8	20	150	m	250	T			50/50	.4						150	m	5/	
2N2788	2N2218AS		SNG	0.8	A	35	O	0.8	40	150	m	250	T			50/60	.4						150	m	5/	
2N2789	2N2219A		SNG	0.8	A	35	O	0.8	100	150	m	250	T			50/70	.4						150	m	5/	
2N2790	2N697		SNS	0.5	A	35	O	0.8	20	150	m	250	T			50/50	.4						150	m	18/	
2N2791	2N2221A		SNG	0.5	A	35	O	0.8	40	150	m	250	E			50/60	.4						150	m	18/	
2N2792	2N2222		SNG	0.5	A	35	O	0.8	100	150	m	250	E			50/70	.4						150	m	18/	
D 2N2793			GPA	170	C	60	O	60	50	15	A	0.1	E				.45						50	A		
2N2794			FET	Table 9																						
2N2795			GPG	.075	A	15	O	0.1	50	50	m	300	T	3.0		24/85	.12						50	m	18/	
D 2N2797			GPG	.075	A	20	O	0.1	40	50	m	150	T	3.5		35/145	.2						50	m	9/	
D 2N2798			GPG	.075	A	25	O	0.1	20	50	m	120	T	4.0		45/175	.25						50	m	9/	
D 2N2799			GPG	.075	A	15	O	0.1	20	50	m	120	T	4.0		45/175	.25						50	m	9/	
★ 2N2800			SPG	0.8	A	35	O	0.8	30	150	m	120	T	25		70/270	.4						150	m	5/31	
★ 2N2800S			SPG	0.8	A	35	O	0.8	30	150	m	120	T	25		70/270	.4						150	m	39/31	
2N2801	2N2905S		SPG	0.8	A	35	O	0.8	75	150	m	120	T	25		70/270	.4						150	m	5/31	
2N2801S	2N2905S		SPG	0.8	A	35	O	0.8	75	150	m	120	T	25		70/270	.4						150	m	39/31	
2N2802	2N4937		SPM	0.25	A	20	O		20	100	u	60	T				.5						10	m		
2N2803	2N4938		SPM	0.25	A	20	O		20	100	u	60	T				.5						10	m		
2N2804	2N4939		SPE	0.25	A	20	O	0.03	20	100	u	60	T	8.0			.5		4.0					A		
2N2805	2N4937		SPM	0.25	A	20	O		40	100	u	60	T				.5						10	m		
2N2806	2N4938		SPM	0.25	A	20	O		40	100	u	60	T				.5						10	m		
2N2807	2N4939		SPA	0.25	A	20	O	0.03	40	100	u	60	T	8.0			.5						10	m		
D 2N2808			SNF	0.3	A	10	O	.025	20	2.0	m	1000	T	0.7			20		5.0				200	M		
D 2N2808A			SNF	0.2	A	10	O	.025	20	2.0	m	1400	T	0.7			22		5.0				200	M		
D 2N2809			SNF	0.2	A	15	O	.025	20	2.0	m	600	T	0.7			17		7.5				200	M		
D 2N2809A			SNF	0.2	A	15	O	.025	20	2.0	m	1000	T	0.7					5.0				200	M		
D 2N2810			SNF	0.2	A	10	O	.025	20	2.0	m	600	T	0.7			17		7.5				200	M		
D 2N2810A			SNF	0.2	A	10	O	.025	20	2.0	m	1000	T	0.7					5.0				200	M		
2N2811	2N5477		SNA	.70	C	60	O	10	20	5.0	A	15	T	350			.5						5.0	A		
2N2812	2N5478		SNA	70	C	60	O	10	40	5.0	A	15	T	350			.5						5.0	A		
2N2813	2N5477		SNA	70	C	80	O	10	20	5.0	A	15	T	350			.5						5.0	A		
2N2814	2N5478		SNA	70	C	80	O	10	40	5.0	A	15	T	350			.5						5.0	A		
2N2815	MJ7000		SNG	200	C	80	O	20	10	10	A	0.6	T			3.5K/12K			1.5				10	A		
2N2816	MJ7000		SNG	200	C	100	O	20	10	10	A	0.6	T			3.5K/12K			1.5				10	A		
2N2817			SNG	200	C	150	O	20	10	10	A	0.6	T			3.5K/12K			1.5				10	A		
2N2818			SNG	200	C	200	O	20	10	10	A	0.6	T			3.5K/12K			1.5				10	A		
2N2819	MJ7000		SNG	200	C	80	O	25	10	15	A	0.6	T			3.5K/12K			1.5				15	A		
2N2820	MJ7000		SNG	200	C	100	O	25	10	15	A	0.6	T			3.5K/12K			1.5				15	A		
2N2821			SNG	200	C	150	O	25	10	15	A	0.6	T			3.5K/12K			1.5				15	A		
2N2822			SNG	200	C	200	O	25	10	15	A	0.6	T			3.5K/12K			1.5				15	A		
2N2823	MJ7000		SNG	200	C	80	O	30	10	20	A	0.6	T			3.5K/12K			1.1				20	A		
2N2824	MJ7000		SNG	200	C	100	O	30	10	20	A	0.6	T			3.5K/12K			1.1				20	A		
2N2825			SNG	200	C	150	O	30	10	20	A	0.6	T			3.5K/12K			1.1				20	A		
2N2826			GPA	4.5	C	15	O	1.0	75	100	m								1.0				500	m	37/	
D 2N2827			GPA	4.5	C	30	O	1.0	75	100	m								1.0				500	m	37/	

	TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} Min @ I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	t_{on} ns Max	ΔV_{BE} mV Max	t_{off} ns Max	Gp dB Min @ $V_{CE(sat)}$ Volts Max	NF dB Max @ f $\frac{I_C}{I_B}$ & I_C	Unit	PACKAGE To-Case No. No.
	2N2828			SNG	40	C	60	O	3.0	20	0.5 A	1.0	T			1500/5000			.4	.5 A		
	2N2829	2N5477		SNG	40	C	60	O	3.0	20	1.0 A	1.0	T			1500/5000			.3	1.0 A		
D	2N2831	2N2221		SNA	0.36	A	12	O	0.2	25	10 m	250	T	5.0					.25	10 m		18/
★	2N2832		1	GPG	85	C	50	O	20	25	10 A	10	T			4000/3100			.5	20 A		3/
★	2N2833			GPG	85	C	75	O	20	25	10 A	10	T			4000/3100			.5	20 A		3/
★	2N2834		1	GPG	85	C	100	O	20	25	10 A					4000/3100			.5	20 A		3/
	2N2835	2N706A		GPA	16	C	32	R	1.0	30	1.0 A	0.24	T						.4	1.0 A		
	2N2836	2N3612		GPA	37.5	C	55	R	3.5	30		0.2	T									3/
	2N2837	2N2907		SPG	0.5	A	35	O	0.8	30	150 m	120	T			60/270			.4	150 m		
	2N2838	2N2907		SPG	0.5	A	35	O	0.8	75	150 m	120	T			60/270			.4	150 m		
	2N2840			UJT	Table 8																	
	2N2841	THRU		FET	Table 9																	
★	2N2844			FET	Table 9																	
★	2N2845		1	SNS	0.36	A	30	O		30	150 m	250	T	8.0		40/40			.4	150 m		18/22
	2N2847	2N2845	1	SNS	0.36	A	20	O		40	150 m	250	T	8.0		25/40			.4	150 m		18/22
	2N2848	2N5859		SNS	0.8	A	20	O		40	150 m	250	T	8.0		25/40			.4	150 m		5/
	2N2849	2N5337		SNG	0.85	A	80	O	3.0	100	1.0 A	30	T	125		175/475			.4	1.0 A		
	2N2850	2N5336		SNG	0.85	A	80	O	3.0	40	1.0 A	30	T	125		175/575			.25	1.0 A		
	2N2851	2N5336		SNG	0.85	A	80	O	3.0	40	1.0 A	30	T	125		175/575						
	2N2852	2N5335		SNG	0.85	A	80	O	3.0	20	1.0 A	30	T	125		175/575			.4	1.0 A		
	2N2853	2N5336		SNG	0.85	A	40	O	3.0	40	1.0 A	30	T	125		175/575			1.5	5.0 A		
	2N2854	2N5337		SNG	0.85	A	40	O	3.0	100	1.0 A	30	T	125		175/475			.4	1.0 A		
	2N2855	2N5336		SNG	0.85	A	40	O	3.0	40	1.0 A	30	T	125		175/575			.4	1.0 A		
	2N2856	2N5334		SNG	0.85	A	40	O	3.0	20	1.0 A	30	T	125		175/575			.4	1.0 A		
★	2N2857		1	SNF	0.2	A	15	O	0.04	30	3.0 m	1000	T						12	4.5	450 M	72/20
	2N2858	2N5335		SNG	0.6	C	80	O	3.0	20	1.0 A	1.0	T			2000/5000			.3	1.0 A		5/
	2N2859	2N5338		SNG	0.6	C	100	O	3.0	20	1.0 A	1.0	T			2000/5000			.3	1.0 A		5/
D	2N2860			GPA	0.15	A	7	O	0.15	40	40 m	250	T	4.0					.4	36 m		18/
	2N2861	2N3798		SPA	0.3	A	20	O		30	10 u	60	T									
	2N2862	2N3798		SPA	0.3	A	20	O		12	10 u	45	T						.2	10 m		
	2N2863	2N2219		SNH	0.8	A	25	O	1.0	30	200 m	150	T	13					10		100 M	5/
	2N2864	2N2219		SNH	0.8	A	25	O	1.0	20	200 m	150	T	13					8.0		100 M	5/
	2N2865			SNF	0.2	A	13	O	0.05	20	4.0 m	600	T	2.5						4.5	200 M	
	2N2866	2N5477		SNA	40	C	80	O	3.0	20	0.5 A	10	T	200					.75		1.0 A	
	2N2867	2N5478		SNA	40	C	80	O	3.0	40	0.5 A	10	T	200					.75		1.0 A	
	2N2868	2N3252		SNA	0.8	A	40	O	1.0	40	.15 A	50	T	20					.25		.15 A	5/
	2N2869	2N3250		GPA	30	C	50	O	10	50	1.0 A	0.2	T						.75		10 A	3/
	2N2870	MP2016		GPA	30	C	50	O	10	50	1.0 A	0.2	T						.5		10 A	3/
D	2N2871			SPC	0.4	A	60	O		15	1.0 m	0.2	T	70								
D	2N2872			SPC	0.4	A	110	O		15	1.0 m	0.2	T	70								
D	2N2873			GPA	.115	A	35	V	0.01	40	1.0 m	300	T	0.7								
	2N2874			SNA	2.0	A	40	O		7.5	.35 A	140	T						5.0	1.0 A		
	2N2875	2N6182		SPP	20	C	50	O	2.0	15	1.5 A	25	T	40					10		70 M	8/
	2N2876			SNA	17.5	C	60	O	2.5	5.0	2.5 A	150	T	20					1.0	2.5 A		
	2N2877	2N5477		SNS	53	C	60	O	5.0	20	1.0 A	30	T	150		120/140			.25	1.0 A		111/
	2N2878	2N5478		SNS	53	C	60	O	5.0	40	1.0 A	50	T	150		80/140			.25	1.0 A		111/
	2N2879	2N5477		SNS	53	C	80	O	5.0	20	1.0 A	30	T	150		120/140			.25	1.0 A		111/
	2N2880	2N5478		SNS	53	C	80	O	5.0	40	1.0 A	50	T	150		80/140			.25	1.0 A		111/
	2N2881	2N4235		SPA	8.5	C	60	O	1.5	20	0.5 A	0.5	E						.4	.5 A		5/
	2N2882	2N4236		SPA	8.5	C	100	O	1.5	20	0.5 A	0.5	E						.4	.5 A		5/
	2N2883	2N3553		SNA	0.8	A	20	O	0.3	20	100 m	400	T	10					.5	100 m		5/
	2N2884	2N3553		SNA	0.8	A	20	O	0.3	20	100 m	400	T	10					.5	100 m		5/
	2N2885			SNA	0.15	A	15	O	0.05	30	10 m	300	T	6.0					.4	10 m		51/
D	2N2886	2N2219		SNF	0.8	A	40	O	0.5	22	5.0 m									12	1000 M	5/
	2N2887			SNA	25	C	80	O	1.2	15	.35 A	140	T	30					1.2	1.0 A		
	2N2888			THY	Table 6																	
	2N2889			THY	Table 6																	
	2N2890	2N3507		SNG	0.8	A	80	O		30	1.0 A	30	T	70		300/1500			.5	1.0 A		5/
	2N2891	2N3507		SNG	0.8	A	80	O		50	1.0 A	30	T	70		300/1500			.5	1.0 A		5/
	2N2892	2N5477		SNG	30	C	80	O	5.0	30	1.0 A	30	T	70		300/1500			.5	1.0 A		
	2N2893	2N5478		SNG	30	C	80	O	5.0	50	1.0 A	30	T	70		300/1500			.5	1.0 A		
★	2N2894		1	SPG	0.36	A	12	O	0.2	40	30 m	400	T	6.0		60/90			.15	10 m		18/22
	2N2894A	MM2894A		SPS	0.36	A	12	S	0.2	40	30 m	800	T	4.5		60/35						18/
★	2N2895		1	SNE	0.5	A	65	O	1.0	40	150 m	120	T	15						8.0	1000 H	18/22
★	2N2896		1	SNE	0.5	A	90	O	1.0	60	150 m	120	T	15						8.0	1000 H	18/22
★	2N2897		1	SNE	0.5	A	45	O	1.0	50	150 m	120	T	15						8.0	1000 H	18/22
	2N2898			SNE	0.5	A	65	O	1.0	40	150 m	120	T	15						8.0	1000 H	46/
	2N2899			SNE	0.5	A	90	O	1.0	60	150 m	120	T	15						8.0	1000 H	46/
	2N2900			SNE	0.5	A	45	O	1.0	50	150 m	120	T	15						8.0	1000 H	46/
	2N2901			SNC	0.36	A	10	O	0.02	30	10 m	300	T	5.0		1500/			.15	10 m		

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C @ I_B & I_C	Unit	PACKAGE To-Case No. No.
D 2N2902	2N5430		SNA	40 C		120 O		0.75	30	500 m	2.0 T					7.5		500 m	
★ 2N2903			**SNM**	0.6 C		30 O		0.05	125	1.0 m	60 T		8.0					**1000 H**	
★ 2N2903A		1	**SNM**	0.6 C		30 O		0.05	125	1.0 m	60 T		8.0					**1000 H**	78/654
★ 2N2904			SPS	3.0 C		40 O		0.6	40	150 m	200 T		8.0	*45/100*		.4		*150 m*	78/654
★ 2N2904A			SPS	3.0 C		60 O		0.6	40	150 m	200 T		8.0	*45/100*		.4		*150 m*	5/31
★ 2N2904AS			SPS	3.0 C		60 O		0.6	40	150 m	200 T		8.0	*45/100*		.4		*150 m*	5/31
★ 2N2904A			SPS	3.0 C		40 O		0.6	40	150 m	200 T		8.0	*45/100*		.4		*150 m*	3931
★ 2N2905			SPS	3.0 C		40 O		0.6	100	150 m	200 T		8.0	*45/100*		.4		*150 m*	39/31
★ 2N2905A			SPS	3.0 C		60 O		0.6	100	150 m	200 T		8.0	*45/100*		.4		*150 m*	5/31
★ 2N2905S			SPS	3.0 C		40 O		0.6	100	150 m	200 T		8.0	*45/100*		.4		*150 m*	5/31
★ 2N2906		1	SPS	1.8 C		40 O		0.6	40	150 m	200 T		8.0	*45/100*		.4		*150 m*	39/31
★ 2N2906A		1	SPS	1.8 C		60 O		0.6	40	150 m	200 T		8.0	*45/100*		.4		*150 m*	18/22
★ 2N2907		1	SPS	1.8 C		40 O		0.6	100	150 m	200 T		8.0	*45/100*		.4		*150 m*	18/22
★ 2N2907A			SPS	1.8 C		60 O		0.6	100	150 m	200 T		8.0	*45/100*		.4		*150 m*	18/22
D 2N2908	2N5069		SNA	75 C		80 R		5.0	12	1.0 A	12 E					10		*1.0 A*	18/22
2N2909	2N2221A		SNA	0.4 A		40 O		1.0	40	.15 A	50 T		20			.25		*.15 A*	53/
2N2910	2N3409		**SNA**	0.3 A		25 O			70	0.1 m	11 T		12				10	**1000 H**	46/
2N2911	2N5682		SNG	5.0 C		125 O		3.0	20	1.0 A	1.0 T			*2000/3000*		.3		*1.0 A*	5/
★ 2N2912		1	GPG	75 C		6 O		25	75	10 A	20 T			*200/2000*		.5		*25 A*	/8
★ 2N2913		1	**SNA**	0.3 A		45 O		0.03	60	10 u	60 T		6.0				4.0	**AUD**	/654
★ 2N2914		1	**SNA**	0.3 A		45 O		0.03	150	10 u	60 T		6.0				3.0	**AUD**	/654
★ 2N2915		1	**SNM**	0.3 A		45 O		0.03	60	10 u	60 T		6.0	/5.0				**AUD**	/654
2N2915A			SNE	0.3 A		45 O		0.03			60 T		6.0				4.0	**1.0 K**	
★ 2N2916		1	**SNM**	0.3 A		45 O		0.03	150	10 u	60 T		6.0	/5.0				**AUD**	/654
2N2916A			SNE	0.3 A		45 O		0.03			60 T		6.0				4.0	**1.0 K**	/654
★ 2N2917		1	**SNM**	0.3 A		45 O		0.03	60	10 u	60 T		6.0	/10				**AUD**	/654
★ 2N2918		1	**SNM**	0.3 A		45 O		0.03	150	10 u	60 T		6.0	/10				**AUD**	/654
★ 2N2919		1	**SNM**	0.3 A		60 O		0.03	60	10 u	60 T		6.0	/5.0				**AUD**	
2N2919A			SNE	0.3 A		60 O		0.03			60 T		6.0				4.0	**1.0 K**	
★ 2N2920		1	**SNM**	0.3 A		60 O		0.03	150	10 u	60 T		6.0	/5.0				**AUD**	/654
2N2920A			SNA	0.3 A		60 O		0.03			60 T								
2N2921			SNA	0.2 A		25 O		0.1					12						
2N2922	MPS6512		SNA	0.2 A		25 O		0.1					12						
2N2923	MPS2923		SNA	0.2 A		25 O		0.1					12						92/
2N2924	MPS2924		SNA	0.2 A		25 O		0.1					12						92/
2N2925	MPS2925		SNA	0.2 A		25 O		0.1					12						92/
2N2926	MPS2926		SNA	0.2 A		18 O		0.1					12						92/
2N2927	2N2904S		SPA	0.8 A		25 O		0.5	30	50 m	100 T		20			.25		*50 m*	5/
D 2N2928			GPF	0.15 A		13 O		0.1	0.8	2.0 m	400 T		2.5				7.5	**200 M**	5/31
★ 2N2929			GPA	0.75 C		10 O		0.1	10	10 m	800 T		2.5			.5		*50 m*	5/
2N2930	2N3427		GPA	0.25 A		12 O		0.5	60	10 m	3.2 T		12			.25		*100 m*	
D 2N2931			SNE	0.05 A		5 O		0.05	30	200 u	20 T		12				14	**AUD**	
D 2N2932			SNE	0.05 A		5 O		0.05	70	50 m	20 T		12				14	**AUD**	
D 2N2933			SNE	0.05 A		5 O		0.05	50	50 m	20 T		12				5.0	**AUD**	
D 2N2934			SNE	0.05 A		30 O		0.05	50	50 m	20 T		11				14	**AUD**	
D 2N2935			SNE	0.05 A		30 O		0.05	70	50 m	20 T		11				14	**AUD**	
2N2936	2N930A		SNA	0.3 A		55 O		0.03	100	10 u	30 T		8.0			.3		*2.0 m*	
2N2937	2N930A		SNA	0.3 A		55 O		0.03	100	10 u	30 T		8.0			.3		*2.0 m*	
2N2938	2N2369A		SNS	0.3 A		13 O		0.5	30	50 m	500 T		4.0	*30/30*		.4		*50 m*	18/
2N2939	2N2193		SNP	0.8 A		60 O		1.0	60	.15 A	150 T		12			10		**50 M**	5/
2N2940	2N3019		SNP	0.8 A		80 O		1.0	60	.15 A	150 T		12			10		**50 M**	5/
2N2941	2N3501		SNP	0.8 A		100 O		1.0	60	.15 A	150 T		12			10		**50 M**	5/
D 2N2942			GPG	0.15 A		25 O		0.1	50	10 m	150 T			*35/145*		*.15*		*10 m*	9/
D 2N2943			GPG	0.15 A		15 O		0.1	30	10 m	120 T			*45/175*		*.2*		*10 m*	
★ 2N2944		1	SPC	0.40 A		15		0.1	6.0	200 u	10 T		10			*0.3*		*200 u*	46/26
2N2944A	2N2944		SPC	0.4 A		10 O		0.1	100	1.0 m	15 T		10						46/
★ 2N2945		1	SPC	0.40 A		25		0.1	4.0	200 u	5.0 T		10			*0.5*		*200 u*	46/26
★ 2N2945A		1	SPC	0.4 A		20 O		0.1	30	200 u	10 T		10			*0.5*	*0*	*200 u*	46/26
★ 2N2946		1	SPC	0.40 A		40		0.1	3.0	200 u	3.0 T		10			*0.8*		*200 u*	46/26
★ 2N2946A		1	SPC	0.4 A		35 O		0.1	20	200 u	5.0 T		10			*0.8*	*0*	*200 u*	46/26
★ 2N2947			SNP	.25 C		60 S		1.5	6.0	400 m	100 T		60	15/				**50 M**	3/1
★ 2N2948		1	SNP	.25 C		40 S		1.5	2.5	400 m	100 T		60	15/		7.0		**30 M**	3/1
★ 2N2949		1	SNP	6.0 C		60 S		0.7	50	40 m	100 T		20	3.5/		10		**50 M**	107/23
★ 2N2950		1	SNP	6.0 C		60 S		0.7	50	40 m	100 T		20	3.5/		10		**50 M**	102/24
★ 2N2951			SNA	3.0 C		60 S		0.25	20	10 m	200 T		8.0			*.4*		*1.0 A*	5/31
2N2952	2N1718		SNA	1.8 C		60 S		0.25	20	10 m	200 T		8.0			*.5*		*.15 A*	18/22
D 2N2953	2N1194		GPA	0.12 A		25 R		.015	100	50 m									1/
D 2N2954	2N834		SNF	0.2 A		20 O		0.5	25	2.0 m	300 T		3.8				15	**100 M**	
★ 2N2955		1	GPG	0.15 A		40 B		0.1	20	50 m	200 T		4.0	*55/80*		*.2*		*10 m*	18/22
★ 2N2956		1	GPG	0.15 A		40 B		0.1	40	50 m	250 T		4.0	*45/90*		*.18*		*10 m*	18/22

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C @ I_B	I_C & f	Unit	PACKAGE To-Case No.
★ 2N2957			GPG	0.15	A	40	B	0.1	60	10 m		300	T	4.0	*40/95*		.15		*10 m*		18/22
2N2958	2N2219S		SNS	3.0	C	20	O	0.6	40	150 m		250	T	8.0	*95/500*		.5		*150 m*		5/
★ 2N2959			SNS	3.0	C	20	O	0.6	100	150 m		250	T	8.0	*95/500*		.5		*150 m*		5/31
2N2960	2N2219A		SNS	3.0	C	30	O	0.6	100	150 m		250	T	8.0	*95/500*		.5		*150 m*		5/
2N2961	2N2219A		SNS	3.0	C	30	O	0.6	100	150 m		250	T	8.0	*95/500*		.5		*150 m*		5/
2N2962			GPA	0.35	A	18	O	0.3				660	T	10							
D 2N2963			GPA	0.35	A	18	O	0.3				660	T	10							
D 2N2964			GPA	0.35	A	15	O	0.3				660	T	10							
D 2N2965			GPA	0.35	A	15	O	0.3				660	T	10							
D 2N2966	2N3283		GPF	0.06	A	20	O	0.1	8.0	3.0 m		500	T	1.5			**8.0**	**9.0**	**800 M**		
D 2N2967	2N929		SNS	0.3	A	6	O		20	10 m		400	T	3.0	*15/15*		.3		*3.0 m*		18/
2N2968	2N3250		SPA	0.15	A	10	O	0.05	15	100 u		8.0	T	6.0			.6		*10 m*		5/
2N2969	2N3250		SPA	0.15	A	10	O	0.05	15	100 u		8.0	T	6.0			.6		*10 m*		18/
2N2970	2N3250		SPA	0.15	A	20	O	0.05	10	100 u		4.0	T	6.0			.8		*10 m*		5/
2N2971	2N3250		SPA	0.15	A	20	O	0.05	10	100 u		4.0	T	6.0			.8		*10 m*		18/
2N2972	2N2913		**SNM**	0.25	A	45	O	0.03	60	10 u		60	T	6.0					**AUD**		
2N2973	2N2914		**SNM**	0.25	A	45	O	0.03	150	10 u		60	T	6.0					**AUD**		
2N2974	2N2915		**SNM**	0.25	A	45	O	0.03	60	10 u		60	T	6.0					**AUD**		
2N2975	2N2916		**SNM**	0.25	A	45	O	0.03	150	10 u		60	T	6.0					**AUD**		
2N2976	2N2917		**SNM**	0.25	A	45	O	0.03	60	10 u		60	T	6.0					**AUD**		
2N2977	2N2918		**SNM**	0.25	A	45	O	0.03	150	10 u		60	T	6.0					**AUD**		
2N2978	2N2906		**SNM**	0.25	A	60	O	0.03	60	10 u		60	T	6.0					**AUD**		
2N2979	2N2920		**SNM**	0.25	A	60	O	0.03	150	10 u		60	T	6.0					**AUD**		
2N2980	2N2060A		**SNA**	0.25	A	60	O	0.5	25	10 u		60	T	15				**8.0**	**1000 H**		
2N2981	2N2223		**SNA**	0.25	A	60	O	0.5	50	10 m		50	T	15			*1.2*		*50 m*		
2N2982	2N2223A		**SNA**	0.25	A	60	O	0.5	50	10 m		50	T	15			*1.2*		*50 m*		
2N2983	2N5335		SNA	1.0	A	80	O		20	500 m		60	T				.6		*1.0 A*		
2N2984	2N5682		SNA	1.0	A	120	O		20	500 m		60	T				.8		*200 m*		
2N2985	2N5338		SNA	1.0	A	80	O		40	500 m		60	T				.8		*200 m*		
2N2986			SNA	1.0	A	120	O		40	500 m		60	T				.8		*200 m*		
2N2987	2N4238		SNA	1.0	A	80	O	1.0	25	200 m		30	T				.8		*200 m*		5/
2N2988	2N5681		SNA	1.0	A	100	O	1.0	25	200 m		30	T				.8		*200 m*		5/
2N2989	2N5337		SNA	1.0	A	80	O	1.0	60	200 m		30	T				.8		*200 m*		5/
2N2990	2N5339		SNA	1.0	A	100	O	1.0	60	200 m		30	T				.8		*200 m*		5/
2N2991	2N5447		SNA	2.0	A	80	O	1.0	25	200 m		30	T				.8		*200 m*		5/
2N2992	2N5479		SNA	2.0	A	100	O	1.0	20	1.0 m		30	T				.8		*200 m*		
2N2993	2N5478		SNA	2.0	A	80	O	1.0	60	200 m		30	T				.8		*200 m*		
2N2994	2N5480		SNA	2.0	A	100	O	1.0	60	200 m		30	T				.8		*200 m*		
2N2995	2N3251		SNA	1.5	A	100	O	1.0	25	0.2 A		10	T	75			1.7		*.2 A*		
2N2996	2N869A		GPF	.075	A	10	O	0.05	25	4.0 m		400	T	3.0				**5.0**	**200 M**		
2N2997	2N998		GPF	.075	A	15	O	0.05	40	4.0 m		400	T	1.8				**4.5**	**200 M**		
2N2998			GPF	.075	A	12	O	0.02	15	3.0 m		600	T	1.7				**8.0**	**1000 M**		
2N2999	2N998		GPF	.075	A	10	O	0.02	10	3.0 m		1400	T	1.7				**7.0**	**1000 M**		
★ 2N3001	THRU		THY	Table 6																	
★ 2N3008			THY	Table 6																	
★ 2N3009		1	SNS	0.36	A	15	O	0.2	30	30 m		350	T	5.0	*15/25*		*.18*		*30 m*		52/27
2N3010	MM1505	1	SNS	0.3	A	6	O	0.05	25	10 m		600	T	3.0	*12/12*		*.25*		*10 m*		18/22
★ 2N3011		1	SNS	0.36	A	12	O	0.2	30	10 m		400	T	4.0	*15/20*		*.2*		*10 m*		18/22
★ 2N3012		1	SPG	0.36	A	12	O	0.2	30	30 m		400	T	6.0	*60/75*		*.15*	*10*	*1.0 m*		18/22
★ 2N3013		1	SNS	0.36	A	15	O	0.2	30	30 m		350	T	5.0	*15/25*		*.18*		*30 m*		52/27
★ 2N3014		1	SNS	0.36	A	20	O	0.2	30	30 m		350	T	5.0	*16/25*		*.18*		*10 m*		52/27
2N3015	2N5859		SNA	0.8	A	30	O		30	150 m		250	T				*.4*		*150 m*		
2N3016	2N5337		SNA	3.33	C	50	O	2.5	60	1.0 A		200	T	50			*.75*		*1.0 A*		5/
2N3017	2N5478		SNA	3.33	C	50	O	5.0	60	1.0 A		200	T	50			*.75*		*5.0 A*		
2N3018	2N5478		SNA	25	C	50	O	10	60	1.0 A		200	T	50			*.75*		*5.0 A*		
★ 2N3019			SNE	0.8	A	80	O	1.0	100	.15 A		100	T	12				**4.0**	**1000 H**		5/
★ 2N3019S			SNE	0.8	A	80	O	1.0	100	.15 A		100	T	12				**4.0**	**1000 H**		39/
★ 2N3020			SNE	0.8	A	80	O	1.0	40	.15 A		100	T	12				**4.0**	**1000 H**		5/
★ 2N3020S			SNE	0.8	A	80	O	1.0	40	.15 A		100	T	12				**4.0**	**1000 H**		5/
★ 2N3021		1	SPS	25	C	30	O	3.0	20	1.0 A		60	T		*100/175*		*1.5*		*3.0 A*		3/11
★ 2N3022		1	SPS	25	C	45	O	3.0	20	1.0 A		60	T		*100/175*		*1.5*		*3.0 A*		3/11
★ 2N3023		1	SPS	25	C	60	O	3.0	20	1.0 A		60	T		*100/175*		*1.5*		*3.0 A*		3/11
★ 2N3024		1	SPS	25	C	30	O	3.0	50	1.0 A		60	T		*100/175*		*1.0*		*3.0 A*		3/11
★ 2N3025		1	SPS	25	C	45	O	3.0	50	1.0 A		60	T		*100/175*		*1.0*		*3.0 A*		3/11
★ 2N3026		1	SPS	25	C	60	O	3.0	50	1.0 A		60	T		*100/175*		*1.0*		*3.0 A*		3/11
2N3027	THRU		THY	Table 6																	
2N3032			THY	Table 6																	
2N3033			SNV	0.3	A	100	R	0.2						6.0	*5.0/*		*1.0*	*5.0*	*100 m*		18/
2N3034			SNV	0.3	A	70	R	0.2						6.0	*5.0/*		*1.0*	*5.0*	*100 m*		18/
2N3035			SNV	0.3	A	50	R	0.2						6.0	*5.0/*		*1.0*	*5.0*	*100 m*		18/

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TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF dB Max @ f	Unit	PACKAGE To-Case No. No.
															t_{on} ns Max	t_{off} ns Max	$V_{CE(sat)}$ Volts Max @	I_C / I_B &	I_C	
2N3036	2N3053S		SNG	0.8	A	80	O	1.2	50	150	m	50	T	15	*180/1200*		.25		*150 m*	5/
2N3037	2N3036		SNG	0.36	A	70	O	0.5	40	150	m	50	T	15	*180/1200*		.2		*10 m*	
2N3038			SNG	0.36	A	60	O	0.5	80	150	m	50	T	15	*180/1200*		.2		*10 m*	
2N3039			SPG	0.36	A	35	O	0.5	20	150	m	50	T	40	*150/650*					
2N3040			SPG	0.36	A	30	O	0.5	40	150	m	50	T	40	*150/650*		.2		*10 m*	
★ 2N3043		1	**SNA**	0.25	A	45	O	0.03	100	10	u	30	T	8.0				**5.0**	**AUD**	/610
★ 2N3044		1	**SNA**	0.25	A	45	O	0.03	100	10	u	30	T	8.0				**5.0**	**AUD**	/610
★ 2N3045		1	SNE	0.25	A	45	O	0.03	100	10	u	30	T	8.0				**5.0**	**AUD**	/610
★ 2N3046			**SNA**	0.25	A	45	O	0.03	50	10	u	30	T	8.0				**5.0**	**AUD**	/610
★ 2N3047		1	**SNA**	0.25	A	45	O	0.03	50	10	u	30	T	8.0				**5.0**	**AUD**	/610
★ 2N3048		1	SNE	0.25	A	45	O	0.03	50	10	u	30	T	8.0				**5.0**	**AUD**	/610
2N3049			**SPA**	0.25	A	20	O	0.1	20	10	u	60	T	8.0				**6.0**	**AUD**	
2N3050			**SPA**	0.25	A	20	O	0.1	20	10	u	60	T	8.0				**6.0**	**AUD**	
2N3051			SPE	0.25	A	20	O	0.1	20	10	u	60	T	8.0	*35/150*			**6.0**	**AUD**	
2N3052			SNG	0.25	A	15	O	0.2	25	10	m	200	T	8.0	*62/55*		.25		*10 m*	
★ 2N3053			SNA	5.0	C	40	O	0.7	50	.15	A	100	T	15			*1.4*		*.15 A*	5/31
D 2N3053A			SNA	5.0	C	60	O	0.7	50	150	m	100	T	15			*.3*		*150 m*	5/31
D 2N3053AS			SNA	5.0	C	60	O	0.7	50	150	m	100	T	15			*.3*		*150 m*	39/31
★ 2N3053S			SNA	5.0	C	40	O	0.7	50	.15	A	100	T	15			*1.4*		*.15 A*	39/31
★ 2N3054A		1	SNA	75	C	60	R	4.0	25	0.5	A	0.75	E				*1.0*		*.5 A*	66/80
★ 2N3055A			SNA	115	C	70	R	15	20	4.0	A	0.4	E							3/
2N3056			SNA	0.4	A	60	O	1.0	40	.15	A	80	T	12			*.25*		*.15 A*	46/
2N3056A			SNA	0.4	A	80	O	1.0	40	.15	A	80	T	12			*.2*		*.15 A*	46/
2N3057			SNE	0.4	A	60	O	1.0	100	.15	A	100	T	12				**4.0**	**1 K**	46/
2N3057A			SNA	0.4	A	80	O	1.0	100	.15	A	100	T	12						46/
2N3058			SPA	0.4	A	6	O	0.1	40					10						46/
2N3059			SPA	0.4	A	10	O	0.1	100	10	u			10						46/
2N3060			SPA	0.4	A	60	O	0.1	30	1.0	m			10						46/
2N3061			SPA	0.4	A	60	O	0.1	60	1.0	m			10						46/
2N3062			SPA	0.4	A	80	O	0.1	20	1.0	m			10						46/
2N3063			SPA	0.4	A	80	O	0.1	50	1.0	m			10						46/
2N3065			SPA	0.4	A	100	O	0.1	30	1.0	m			10						46/
2N3066,A	THRU		FET	Table	9															
★ 2N3071			FET	Table	9															
★ 2N3072		1	SPG	0.8	A	60	O	0.5	30	50	m	130	T	10	*40/100*		*.25*		*50 m*	39/79
★ 2N3073		1	SPG	0.36	A	60	O	0.5	30	50	m	130	T	10	*40/100*		*.25*		*50 m*	18/22
2N3074			GPA	0.14	A	25	S	0.02	25	3.5	m			3.0						12/
2N3075			GPA	0.14	A	25	S	0.02	20	3.0	m			3.0						12/
2N3076	MJ7000		SNG	125	C	50	O	10	30	7.0	A	50	T		*500/3500*		*1.0*		*10 A*	
2N3077			SNA	0.36	A	60	O	0.05	100	10	u	15	T	6.0			*.35*		*1.0 m*	18/
2N3078			SNA	0.36	A	60	O	0.05	40	10	u	15	T	6.0			*.35*		*1.0 m*	18/
2N3079	2N5241		SNA	178	C	200	O	0.05	7.0	5.0	A	2.1	E				*.7*		*5.0 A*	
2N3080	2N5241		SNA	178	C	300	O		7.0	5.0	A	2.1	E				*.7*		*5.0 A*	
2N3081	2N2904S		SPG	0.6	A	50	O	0.6	20	500	m	150	T	13	*60/175*		*.3*		*150 m*	5/31
D 2N3082			SNC	0.5	A	7	O	0.1	100	.25	m	100	T	8.0						
D 2N3083			SNC	0.5	A	7	O	0.1	100	.25	m	100	T	8.0						
2N3084			FET	Table	9															
2N3089,A			FET	Table	9															
2N3091	THRU		THY	Table	6															
2N3106			THY	Table	6															
2N3107			SNA	0.8	A	60	O		100	.15	A	70	T				*1.0*		*1.0 A*	
2N3108			SNG	0.8	A	60	O	1.0	40	150	m	60	T	20	*200/600*		*.25*		*150 m*	5/
2N3109			SNA	0.8	A	40	O		100	.15	A	70	T				*1.0*		*1.0 A*	
2N3110	2N2193		SNG	0.8	A	40	O	1.0	40	150	m	60	T	25	*200/600*		*.25*		*150 m*	5/
2N3110S			SNG	0.8	A	40	O	1.0	40	150	m	60	T	25	*200/600*		*.25*		*150 m*	39/
★ 2N3112			FET	Table	9															
★ 2N3113			FET	Table	9															
★ 2N3114			SNA	0.8	A	150	O	02	30	30	m	40	T	9.0			*1.0*		*50 m*	5/31
★ 2N3114S			SNA	0.8	A	150	O	02	30	30	m	40	T	9.0			*1.0*		*50 m*	39/31
2N3115	2N2221		SNG	0.4	A	20	O	0.6	40	.15	A	250	T	8.0	*95/500*		*.5*		*.15 A*	18/22
2N3116	2N2222		SNG	0.4	A	20	O	0.6	100	.15	A	250	T	8.0	*95/500*		*.5*		*.15 A*	18/22
2N3117	2N930A		SNE	0.36	A	60	O	0.05	250	10	u	60	T	4.5				**4.0**	**100 H**	18/
2N3118			SNA	1.0	A	60	O	0.05	50	25	m	250	T	6.0						5/
2N3119	2N3500		SNA	1.0	A	80	O	0.05	50	100	m	250	T	6.0	*20/*		*.5*		*100 m*	5/
2N3120	2N2904S	1	SPG	0.8	A	45	O	0.5	30	50	m	130	T	10	*40/100*		*.25*		*50 m*	39/79
2N3121	2N2907		SPG	0.36	A	45	O	0.5	30	50	m	130	T	10	*40/100*		*.25*		*50 m*	18/
2N3122	2N2219A		SNA	0.8	A	30	O	0.5	25	300	m	60	T	25			*1.5*		*300 m*	5/
D 2N3123	2N2219A		SNA	0.8	A	30	O	0.8	100	.15	A	400	T	8.0			*.4*		*.15 A*	5/
2N3124			GPA	90	C	30	S	15	50	10	A	0.125	E				*.5*		*10 A*	41/
2N3125			GPA	90	C	80	S	3.3	30	3.0	A	0.15	E				*1.5*		*3.0 A*	41/

	TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max @	NF @ f dB Max / $\frac{I_C}{I_B}$ &	I_C	Unit	PACKAGE To-Case No. No.
	2N3126			GPA	90	C	75	S	15	10	10	A	0.06	E							*1.0*		41/
★	2N3127			GPF	0.1	A	20	O	0.05	20	3.0	m	400	T	1.2			**23**	**4.5**		**200**	**M**	72/20
D	2N3128			SNA	0.15	A	20	O	0.1	50	0.1	m	60	T	6.0			*.25*			*1.0*	*m*	
	2N3129			SNA	0.15	A	45	O	0.1	100			60	T	6.0			*.25*			*1.0*	*m*	
D	2N3130			SNA	0.15	A	60	O	0.1	60			60	T	6.0			*.25*			*1.0*	*m*	
D	2N3131			SNG	0.15	A	15	O	0.1	30	10	m	250	T	4.0	*35/75*		*.25*			*10*	*m*	
D	2N3132			GPG	90	C	70	S	5.0	40	2.0	A	0.003	T		*20K/20K*		*1.5*			*5.0*	*A*	3/
★	2N3133			SPG	0.6	A	35	O	0.6	40	.15	A	200	T	10	*75/150*		*.6*			*.15*	*A*	5/31
★	2N3133S			SPG	0.6	A	35	O	0.6	40	.15	A	200	T	10	*75/150*		*.6*			*.15*	*A*	39/31
	2N3134	2N3905S		SPG	0.6	A	35	O	0.6	100	.15	A	200	T	10	*75/150*		*.6*			*.15*	*A*	5/
★	2N3135		1	SPG	0.4	A	35	O	0.6	40	.15	A	200	T	10	*75/150*		*.6*			*.15*	*A*	18/22
	2N3136	2N2907		SPG	0.4	A	35	O	0.6	100	.15	A	200	T	10	*75/150*		*.6*			*.15*	*A*	18/
★	2N3137		1	SNP	2.0	C	40	O	150	20	50	m	500	T	3.5*	**0.4/**		**6.0**			**250**	**M**	5/31
	2N3138	2N5477		SNA	20	C	65	O	2.0	10	1.0	A	100	T	30								
	2N3139			SNA	20	C	140	O	2.0	10	1.0	A	100	T	30								
	2N3140	2N5477		SNA	20	C	65	O	2.0	10	1.0	A	100	T	30								
	2N3141			SNA	20	C	140	O	2.0	10	1.0	A	100	T	30								
	2N3142	2N5477		SNA	25	C	65	O	2.0	10	1.0	A	100	T	30								
	2N3143			SNA	25	C	140	O	2.0	10	1.0	A	100	T	30								
	2N3144	2N5477		SNA	25	C	65	O	2.0	10	1.0	A	100	T	30								
	2N3145			SNA	25	C	140	O	2.0	10	1.0	A	100	T	30								
	2N3146	2N3616		GPA	150	C	140	V	15	30	5.0	A	0.2	T				*.4*			*5.0*	*A*	3/
	2N3147	2N3616		GPA	150	C	160	V	15	30	5.0	A	0.2	T				*.4*			*5.0*	*A*	3/
D	2N3148			GPA		A	6	O	0.05	70	20	m	25	T	6.0			*.2*			*50*	*m*	24/
	2N3149			SNG	300	C	80	O	70	10	50	A	0.1	T		*10K/20K*		*1.5*			*50*	*A*	
	2N3150			SNG	300	C	100	O	70	10	50	A	0.1	T		*10K/20K*		*1.5*			*50*	*A*	
	2N3151			SNG	300	C	150	O	70	10	50	A	0.1	T		*10K/20K*		*1.5*			*50*	*A*	
	2N3152			SNA	.025	C	120	O	0.1	40	30	m	200	T	10								
	2N3153			SNC	0.3	A	15	I	0.1	2.0	1.0	m	30	T	8.0			*750*			*1.0*	*m*	18/
	2N3154			GPG	37.5	C	25	O	3.0	60	0.5	A	0.9	E		*10K/20K*		*1.1*			*3.0*	*A*	
	2N3155			GPG	37.5	C	40	O	3.0	60	0.5	A	0.9	E		*10K/20K*		*1.1*			*3.0*	*A*	
	2N3156			GPG	37.5	C	55	O	3.0	60	0.5	A	0.9	E		*10K/20K*		*1.1*			*3.0*	*A*	
	2N3157			GPG	37.5	C	65	O	3.0	60	0.5	A	0.9	E		*10K/20K*		*1.1*			*3.0*	*A*	
	2N3158			GPG	37.5	C	25	O	3.0	30	0.5	A	0.3	E		*10K/20K*		*1.4*			*3.0*	*A*	
	2N3159			GPG	37.5	C	40	O	3.0	30	0.5	A	0.3	E		*10K/20K*		*1.4*			*3.0*	*A*	
	2N3160			GPG	37.5	C	55	O	3.0	30	0.5	A	0.3	E		*10K/20K*		*1.4*			*3.0*	*A*	
	2N3161			GPG	37.5	C	65	O	3.0	30	0.5	A	0.3	E		*10K/20K*		*1.4*			*3.0*	*A*	
D	2N3162	2N3411		**SNA**	0.3	A	25	O		50	10	m	300	T	6.0				**12**		**AUD**		
	2N3163			SPA	85	C	40	O	3.0	12	1.0	A	1.0	T				*.75*			*1.0*	*A*	
	2N3164			SPA	85	C	60	O	3.0	12	1.0	A	1.0	T				*.75*			*1.0*	*A*	
	2N3165			SPA	85	C	80	O	3.0	12	1.0	A	1.0	T				*.75*			*1.0*	*A*	
	2N3166			SPA	85	C	100	O	3.0	12	1.0	A	1.0	T				*.75*			*1.0*	*A*	
	2N3167	2N4901		SPA	85	C	40	O	3.0	12	1.0	A	1.0	T				*.75*			*1.0*	*A*	53/
	2N3168	2N4902		SPA	85	C	60	O	3.0	12	1.0	A	1.0	T				*.75*			*1.0*	*A*	53/
	2N3169	2N4903		SPA	85	C	80	O	3.0	12	1.0	A	1.0	T				*.75*			*1.0*	*A*	53/
	2N3170			SPA	85	C	100	O	3.0	12	1.0	A	1.0	T				*.75*			*1.0*	*A*	53/
	2N3171			SPA	75	C	40	O	3.0	12	1.0	A	1.0	T				*.75*			*1.0*	*A*	3/
	2N3172			SPA	75	C	60	O	3.0	12	1.0	A	1.0	T				*.75*			*1.0*	*A*	3/
	2N3173			SPA	75	C	80	O	3.0	12	1.0	A	1.0	T				*.75*			*1.0*	*A*	3/
	2N3174			SPA	75	C	100	O	3.0	12	1.0	A	1.0	T				*.75*			*1.0*	*A*	3/
	2N3175	2N6182		SPA	85	C	40	O	5.0	10	2.0	A	1.0	T				*1.0*			*2.0*	*A*	
	2N3176	2N6182		SPA	85	C	60	O	5.0	10	2.0	A	1.0	T				*1.0*			*2.0*	*A*	
	2N3177	2N6182		SPA	85	C	80	O	5.0	10	2.0	A	1.0	T				*1.0*			*2.0*	*A*	
	2N3178	2N6184		SPA	85	C	100	O	5.0	10	2.0	A	1.0	T				*1.0*			*2.0*	*A*	
	2N3179	2N4910		SPA	85	C	40	O	5.0	10	2.0	A	1.0	T				*1.0*			*2.0*	*A*	53/
	2N3180	2N4911		SPA	85	C	60	O	5.0	10	2.0	A	1.0	T				*1.0*			*2.0*	*A*	53/
	2N3181	2N4912		SPA	85	C	80	O	5.0	10	2.0	A	1.0	T				*1.0*			*2.0*	*A*	53/
	2N3182	2N3790		SPA	85	C	100	O	5.0	10	2.0	A	1.0	T				*1.0*			*2.0*	*A*	53/
	2N3183			SPA	75	C	40	O	5.0	10	2.0	A	1.0	T				*1.0*			*2.0*	*A*	3/
	2N3184			SPA	75	C	60	O	5.0	10	2.0	A	1.0	T				*1.0*			*2.0*	*A*	3/
	2N3185			SPA	75	C	80	O	5.0	10	2.0	A	1.0	T				*1.0*			*2.0*	*A*	3/
	2N3186			SPA	75	C	100	O	5.0	10	2.0	A	1.0	T				*1.0*			*2.0*	*A*	3/
	2N3187	2N6182		SPA	85	C	40	O	5.0	10	3.0	A	1.0	T				*.9*			*3.0*	*A*	
	2N3188	2N6182		SPA	85	C	60	O	5.0	10	3.0	A	1.0	T				*.9*			*3.0*	*A*	
	2N3189	2N6182		SPA	85	C	80	O	5.0	10	3.0	A	1.0	T				*.9*			*3.0*	*A*	
	2N3190	2N6184		SPA	85	C	100	O	5.0	10	3.0	A	1.0	T				*.9*			*3.0*	*A*	
	2N3191	2N4910		SPA	85	C	40	O	5.0	10	3.0	A	1.0	T				*.9*			*3.0*	*A*	53/
	2N3192	2N4911		SPA	85	C	60	O	5.0	10	3.0	A	1.0	T				*.9*			*3.0*	*A*	53/
	2N3193	2N4912		SPA	85	C	80	O	5.0	10	3.0	A	1.0	T				*.9*			*3.0*	*A*	53/
	2N3194	2N6226		SPA	85	C	100	O	5.0	10	3.0	A	1.0	T				*.9*			*3.0*	*A*	53/

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF @ f dB Max		Unit	PACKAGE To-Case No.
															t_{on} ns Max	t_{off} ns Max	$V_{CE(sat)}$ Volts Max	@ I_C/I_B	& I_C		
2N3195			SPA	75	C	40	O	5.0	10	3.0	A	1.0	T				.9		3.0	A	3/
2N3196			SPA	75	C	60	O	5.0	10	3.0	A	1.0	T				.9		3.0	A	3/
2N3197			SPA	75	C	80	O	5.0	10	3.0	A	1.0	T				.9		3.0	A	3/
2N3198			SPA	75	C	100	O	5.0	10	3.0	A	1.0	T				.9		3.0	A	3/
2N3199	2N6192		SPA	40	C	40	O	3.0	20	1.0	A	1.0	T				.3		1.0	A	
2N3200	2N6192		SPA	40	C	60	O	3.0	20	1.0	A	1.0	T				.3		1.0	A	
2N3201	2N6192		SPA	40	C	80	O	3.0	20	1.0	A	1.0	T				.3		1.0	A	
2N3202	2N3202		SPA	8.8	C	40	O	3.0	20	1.0	A	1.0	T				.3		1.0	A	5/
2N3203	2N3203		SPA	8.8	C	60	O	3.0	20	1.0	A	1.0	T				.3		1.0	A	5/
2N3204	2N3204		SPA	8.8	C	80	O	3.0	20	1.0	A	1.0	T				.3		1.0	A	5/
2N3205	2N6182		SPA	40	C	40	O	2.0	20	0.5	A	1.0	T				.4		.5	A	
2N3206	2N6182		SPA	40	C	60	O	2.0	20	0.5	A	1.0	T				.4		.5	A	
2N3207			SPA	40	C	100	O	2.0	20	0.5	A	1.0	T				.4		.5	A	
2N3208			SPA	8.8	C	40	O	2.0	20	0.5	A	1.0	T				.4		.5	A	5/
2N3209	2N869A		SPG	0.36	A	20	O	0.2	30	30	m	400	T	5.0	60/90		.2		30	m	18/
2N3210	2N708	1	SNS	0.36	A	15	O	0.5	30	10	m	300	T	6.0	40/40		.75		.2	A	18/22
2N3211	2N3013	1	SNA	0.36	A	15	O	0.5	50	10	m	350	T	4.0			.2		10	m	18/22
2N3212			GPG	14	C	80	O	5.0	30	3.0	A				6000/9000		.5		5.0	A	37/
2N3213			GPG	14	C	60	O	5.0	30	3.0	A				6000/9000		.5		5.0	A	37/
2N3214			GPG	14	C	40	O	5.0	30	3.0	A				6000/9000		.5		5.0	A	37/
2N3215			GPG	14	C	30	O	5.0	25	3.0	A				6000/9000		.5		5.0	A	37/
D 2N3216			GPG	0.15	A	10	O	0.5	60	200	m	10	T	20	50/350		.22		200	m	5/
2N3217	2N2944		SPC	0.4	A	10	O	0.1	40	5.0	m	1.0	T	14							46/
2N3218	2N2945		SPC	0.4	A	20	O	0.1	30	5.0	m	1.0	T	14							46/
2N3219	2N2945		SPC	0.4	A	35	O	0.1	20	5.0	m	1.0	T	14							46/
2N3220	2N5477		SNA	6.0	C	80	O	2.0	20	1.0	A	10	T	180			1.2		1.0	A	
2N3221	2N5477		SNA	6.0	C	80	O	2.0	40	1.0	A	10	T	180			1.2		1.0	A	
2N3222	2N5477		SNA	6.0	C	60	O	2.0	20	1.0	A	10	T	180			1.2		1.0	A	
2N3223	2N5479		SNA	6.0	C	60	O	2.0	40	1.0	A	10	T	180			1.2		1.0	A	
2N3224	2N3498		SPA	0.7	A	100	O		20	50	m	60	T	20							5/
2N3225	2N3498		SPA	0.7	A	100	O		40	50	m	80	T	20							5/
2N3226	2N5873		SNA	75	C	35	O	5.0	20	2.0	A	30	T				1.2		2.7	A	3/
★ 2N3227		1	SNS	0.36	A	20	O	0.5	100	10	m	500	T	4.0	12/18		.25		10	m	18/22
2N3228			THY	Table 6																	
D 2N3230			SNG	25	C	60	O	7.0	2K	2.0	A	40	T	60	350/2150		1.4		2.0	A	
D 2N3231			SNG	25	C	80	O	7.0	2K	2.0	A	40	T	60	350/2150		1.4		2.0	A	
★ 2N3232			SNA	117	C	60	O	7.5	18	3.0	A	0.36	E				2.5		3.0	A	/1
2N3233			SNA	117	C	100	O	7.5	18	3.0	A	0.36	E				2.5		3.0	A	
2N3234			SNA	117	C	160	O	7.5	18	3.0	A	0.36	E				2.4		3.0	A	
★ 2N3235			SNA	117	C	55	O	15	20	4.0	A	20	E				1.1		4.0	A	/1
2N3236			SNA	150	C	90	O	15	17	5.0	A	17	E				1.1		5.0	A	
2N3237			SNA	200	C	75	O	20	12	10	A	12	E				2.0		10	A	
2N3238			SNA	150	C	80	O	15	8.5	10	A	8.5	E				3.0		10	A	
2N3239	2N5882		SNA	150	C	80	O	15	8.5	10	A	8.5	E				1.0		10	A	
2N3240	2N5631		SNA	150	C	160	O	15	8.5	10	A	8.5	E				1.0		10	A	
2N3241	2N2219		SNA	0.5	A	25	O	0.1	50	10	m	50	T	30				10	1000	H	
2N3241A			SNE	0.5	A	25	O	0.2				100	T	20				6.0			
2N3242			SNE	0.5	A	25	O	0.2	75	10	m	50	T	30				6.0	1000	H	
2N3242A			SNE	0.5	A	40	O	0.3				100	T	20							
★ 2N3244			SPG	1.0	A	40	O	1.0	50	0.5	A	175	T	25	50/185		.3		.15	A	5/31
★ 2N3245			SPG	1.0	A	50	O	1.0	30	0.5	A	150	T	25	55/165		.35		.15	A	5/31
2N3246	2N930A		SNE	0.35	A	45	O	0.05	200	10	u	60	T	5.0				2.0	AUD		18/
2N3247	2N930A		SNE	0.15	A	45	O	0.05	200	10	u	60	T	5.0				2.0	AUD		
2N3248	2N869A	1	SPG	0.36	A	12	O	0.2	50	0.1	m	250	T	8.0	90/100		.12		10	m	18/22
★ 2N3249		1	SPG	0.36	A	12	O	0.2	100	0.1	m	300	T	8.0	90/100		.12		10	m	18/22
★ 2N3250		1	SPE	0.36	A	40	O	0.2	50	10	m	250	T	6.0	70/225			6.0			18/22
★ 2N3250A		1	SPE	0.36	A	60	O	0.2	50	10	m	250	T	6.0	70/225			6.0			18/22
★ 2N3251		1	SPE	0.36	A	40	O	0.2	100	10	m	300	T	6.0	70/250		.25	6.0	10	m	18/22
★ 2N3251A		1	SPG	0.36	A	60	O	0.2	100	10	m	300	T	6.0	70/250		.25		10	m	18/22
★ 2N3252			SNG	1.0	A	30	O	1.0	30	0.5	A	200	T	12	45/70		.3		.15	A	5/31
★ 2N3253			SNG	1.0	A	40	O	1.0	25	375	m	175	T	12	50/90		.35		.15	A	5/31
2N3254	THRU		THY	Table 6																	
2N3259			THY	Table 6																	
2N3260			SNG	200	C	200	O	30	10	20	A	0.6	T		6K/10K		1.5		20	A	
2N3261			SNS	0.3	A	15	O	0.5	40	10	m	600	T	3.5	13/16		.35		.1	A	52/
2N3262			SNS	8.75	C	80	O	1.5	40	0.5	A	150	T	20	40/750		.6		1.0	A	39/
2N3263			SNG	75	C	90	O	25	20	15	A	20	T		500/2000		1.0		20	A	
2N3264			SNG	75	C	60	O	25	20	15	A	20	T		500/2000		1.6		20	A	
2N3265	MJ7000		SNG	125	C	90	O	25	20	15	A	20	T		500/2000		1.0		20	A	
2N3266	MJ7000		SNG	125	C	60	O	25	20	15	A	20	T		500/2000		1.6		20	A	

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} Min @ I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF dB Max @ f	Unit	PACKAGE To-Case No.
														t_{on} ns Max	t_{off} ns Max	$V_{CE(sat)}$ Volts Max @ I_C/I_B			
2N3267			GPF	.075	A	8	O	0.02	10	3.0 m	900	T	1.7				8.0	1000 M	
2N3268			SNE	0.15	A	45	O	.025	12	10 m	2.0	T					30	1000 H	5/
2N3269	THRU		THY	Table 6															
2N3276			THY	Table 6															
★ 2N3277			FET	Table 9															
★ 2N3278			FET	Table 9															
★ 2N3279			GPF	0.1	A	20	O	0.05	10	3.0 m	600	T				17	3.5	200 M	
★ 2N3280			GPF	0.1	A	20	O	0.05	10	3.0 m	600	T				17	3.5	200 M	
★ 2N3281			GPF	0.1	A	15	O	0.05	10	3.0 m	550	T				16	5.0	200 M	
2N3282			GPF	0.1	A	15	O	0.05	10	3.0 m	550	T				16	5.0	200 M	
★ 2N3283		1	GPF	0.1	A	25	S	0.05	10	3.0 m	250	T	1.5			16	5.0	200 M	
★ 2N3284		1	GPF	0.1	A	25	S	0.05	10	3.0 m	250	T	1.5			16	6.0	200 M	72/20
★ 2N3285		1	GPH	0.1	A	20	S	0.05	5.0	3.0 m	250	T	1.5			14		200 M	72/20
★ 2N3286			GPH	0.1	A	20	S	0.05	5.0	3.0 m	250	T	1.5			14		200 M	72/20
★ 2N3287		1	SNF	0.2	A	20	O	0.05	15	2.0 m	350	T	1.1			17	6.0	200 M	72/20
2N3288			SNF	0.2	A	20	O	0.05	15	2.0 m	350	T	1.5			17	6.0	200 M	72/20
2N3289			SNF	0.2	A	15	O	0.05	10	2.0 m	300	T	1.5			17	7.0	200 M	
2N3290			SNF	0.2	A	15	O	0.05	10	2.0 m	300	T	1.5			17	7.0	200 M	
★ 2N3291		1	SNF	0.2	A	25	S	0.05	10	2.0 m	250	T	2.0			16	8.0	200 M	72/20
★ 2N3292		1	SNF	0.2	A	25	S	0.05	10	2.0 m	250	T	2.0			16	9.0	200 M	72/20
2N3293			SNA	0.2	A	20	S	0.05	10	2.0 m	250	T	2.0						
★ 2N3294		1	SNF	0.2	A	20	S	0.05	10	2.0 m	250	T	2.0			16	8.0	200 M	72/20
★ 2N3295		1	SNP	0.8	A	60	S	0.25	20	10 m	200	T	8.0			14		30 M	5/31
★ 2N3296		1	SNP	0.7	A	60	S	0.7	5.0	40 m	100	T	20	3.0/		16		30 M	102/24
★ 2N3297		1	SNP	25	C	60	S	1.5	6.0	0.4 A	100	T	60	12/		10		30 M	3/1
2N3298	2N2369	1	SNA	1.0	C	15	O	0.1	80	10 m	200	T	6.0						18/22
★ 2N3299			SNG	0.8	A	30	O	0.5	40	.15 A	250	T	8.0	60/150	.22			.15 A	5/31
★ 2N3300			SNG	0.8	A	30	O	0.5	100	.15 A	250	T	8.0	60/150	.22			.15 A	5/31
★ 2N3301		1	SNG	0.36	A	30	O	0.5	40	.15 A	250	T	8.0	60/150	.22			.15 A	18/22
★ 2N3302			SNG	0.36	A	30	O	0.5	100	.15 A	250	T	8.0	60/150	.22			.15 A	18/22
★ 2N3303		1	SNS	0.6	A	12	O	1.0	30	0.3 A	450	T	15	15/25	.33			.3 A	/94
2N3304		1	SPG	0.3	A	6	O		30	10 m	500	T	3.5	60/60	.16			10 m	18/22
2N3305			SPE	0.6	A	40	O		40	0.1 m	20	T	30				4.0	1000 H	5/
2N3306			SPE	0.6	A	40	O		100	0.1 m	20	T	30				4.0	1000 H	5/
★ 2N3307		1	SPF	0.2	A	35	O	0.05	40	2.0 m	300	T	1.3				4.0	200 M	72/20
2N3308	2N3307	1	SPF	0.2	A	25	O	0.05	25	2.0 m	300	T	1.6				5.0	200 M	72/20
2N3309	2N3553		SNP	3.5	C	50	S	0.5	5.0	30 m	300	T	10			7.0		250 M	39/
D 2N3309A	2N3553		SNP	5.0	C	60	S	0.5	8.0	50 m	300	T	6.0			7.4		250 M	39/
D 2N3310			SNP	0.3	A	15	O	0.2	10	20 m	300	T	3.0			10		250 M	
★ 2N3311		1	GPA	170	C	30	S	5.0	60	3.0 A	0.06	E				.1		3.0 A	36/5
★ 2N3312		1	GPA	170	C	45	S	5.0	60	3.0 A	0.06	E				.1		3.0 A	36/5
★ 2N3313		1	GPA	170	C	60	S	5.0	60	3.0 A	0.06	E				.1		3.0 A	36/5
★ 2N3314		1	GPA	170	C	30	S	5.0	100	3.0 A	0.1	E				.1		3.0 A	36/5
★ 2N3315			GPA	170	C	45	S	5.0	100	3.0 A	0.1	E				.1		3.0 A	36/5
★ 2N3316		1	GPA	170	C	60	S	5.0	100	3.0 A	0.1	E				.1		3.0 A	36/5
2N3317			SPC	0.15	A	30	O	0.05			6.4	T	9.0						
2N3318			SPC	0.15	A	15	O	0.05			7.6	T	9.0						
2N3319			SPC	0.15	A	6	O	0.05			12	T	10						
2N3320			GPS	0.06	A	10	O	0.1	50	20 m	600	T	3.0	20/35	.19			40 m	18/
2N3321			GPS	0.06	A	7	O	0.1	100	10 m	600	T	3.5	20/35	.12			10 m	18/
2N3322		1	GPS	0.06	A	7	O	0.1	30	40 m	600	T	3.5	20/35	.25			20 m	18/
★ 2N3323		1	GPF	0.15	A	35	S	0.1	30	3.0 m	200	T	3.0				11	100 M	18/22
★ 2N3324		1	GPF	0.15	A	35	S	0.1	30	3.0 m	200	T	3.0				24	10 M	18/22
★ 2N3325		1	GPA	0.15	A	35	S	0.1	30	3.0 m	200	T	3.0						18/22
2N3326	2N2218A		SNG	0.8	A	45	O	0.8	40	.15 A	250	T	8.0	45/340	.4			.15 A	5/31
2N3328	THRU		FET	Table 9															
2N3336			FET	Table 9															
2N3337	2N3287		SNF	0.3	A	40	O	0.05	30	4.0 m	400	T	1.6			30	5.5	60 M	
2N3338	2N3289		SNF	0.3	A	40	O	0.05	30	4.0 m	400	T	1.6			30	5.5	60 M	
2N3339	2N3288		SNF	0.3	A	40	O	0.05	30	4.0 m	400	T	1.6			30	5.5	200 M	
2N3340			SNA	0.4	A	20	O	0.03	40	10 u	70	T	6.0			.2		10 u	46/
2N3341			SPA	0.4	A	20	O	0.03	40	10 u	50	T	6.0			.25		10 u	46/
2N3342			SPG	0.25	A	8	O	0.05	30	5.0 m			10	150/280		.1		5.0 m	5/
2N3343			SPC	0.25	A	8	O	0.05	20	.25 m	2.0	T	25						5/
2N3344			SPC	0.25	A	30	O	0.05	25	1.0 m	2.0	T	25						5/
2N3345			SPC	0.25	A	50	O	0.05	15	1.0 m	2.0	T	25						5/
2N3346			SPC	0.25	A	50	O	0.05	25	1.0 m	2.0	T	25						5/
2N3347	2N3726		SPM	0.3	A	45	O	0.03	40	10 u	60	T	6.0					AUD	5/
2N3348	2N3726		SPM	0.3	A	45	O	0.03	40	10 u	60	T	6.0					AUD	
2N3349	2N3726		SPM	0.3	A	45	O	0.03	40	10 u	60	T	6.0					AUD	

	TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	t_{on} ns Max	t_{off} ns Max	Gp dB Min	NF @ f dB Max	$V_{CE(sat)}$ Volts @ I_C/I_B & I_C	Unit	PACKAGE To-No.	Case No.
	2N3350	2N3726		SPM	0.3 A		45 O		0.03	100	10 u	60 T		6.0								AUD		
	2N3351	2N3726		SPM	0.3 A		45 O		0.03	100	10 u	60 T		6.0								AUD		
	2N3352	2N3726		SPM	0.3 A		45 O		0.03	100	10 u	60 T		6.0								AUD		
	2N3353	THRU		THY	Table 6																			
	2N3364			THY	Table 6																			
	2N3365	THRU		FET	Table 9																			
	2N3370			FET	Table 9																			
D	2N3374	2N3500		SNA	5.0 C		80 O		0.5	10	.17 A	230 T		10					.3		.15 A		5/	
★	2N3375		1	SNP	11.6 C		40 O		1.5	10	.25 A	400 T		10					875		100 M		60/36	
D	2N3376	THRU		FET	Table 9																			
	2N3387			FET	Table 9																			
	2N3389	MPS6521		SNG	0.6 A		160 O		.007	60	7.0 m	36 T		35	1200/1600				1.0		7.0 m		5/	
	2N3390	MPS6515		SNA	0.2 A		25 O		0.1	400	2.0 m			2.0									92/	
	2N3391	MPS6520		SNA	0.2 A		25 O		0.1	250	2.0 m			2.0									92/	
	2N3391A	MPS3392		SNE	0.2 A		25 O		0.1	250	2.0 m			10						5.0	AUD		92/	
	2N3392	MPS3393		SNA	0.2 A		25 O		0.1	150	2.0 m			2.0									92/	
	2N3393	MPS3393		SNA	0.2 A		25 O		0.1	90	2.0 m			4.5									92/	
	2N3394	MPS3394		SNA	0.2 A		25 O		0.1	55	2.0 m			4.5									92/	
	2N3395	MPS3395		SNA	0.2 A		25 O		0.1	150	2.0 m			4.5									92/	
	2N3396	MPS3396		SNA	0.2 A		25 O		0.1	90	2.0 m			4.5									92/	
	2N3397	MPS3397		SNA	0.2 A		25 O		0.1	55	2.0 m			4.5									92/	
	2N3398	MPS3398		SNA	0.2 A		25 O		0.1	55	2.0 m			4.5									92/	
	2N3399			GPA	0.08 A				.007	10	1.5 m	400 T		2.0										
D	2N3400			GPG	0.15 A		20 O		0.1	50	10 m	150 T		3.0	60/260				.15		10 m		9/	
	2N3401			SPC	0.25 A		25 O		0.1			0.08 T		15					.25		5.0 m		5/	
	2N3402	MPS6513		SNA	0.56 A		25 O		0.5	75	2.0 m								.3		50 m			
	2N3403	MPS6515		SNA	0.56 A		25 O		0.5	180	2.0 m								.3		50 m			
	2N3405			SNA	0.56 A		50 O		0.5	180	2.0 m								.3		50 m			
D	2N3406			UJT	Table 8																			
D	2N3407			SNF	0.2 A		18 O		0.1	10	10 m	300 T		2.5						6.0	30 M			
D	2N3408			SPF	4.0 A		25 O		0.5	10	40 m	200 T		10						7.0	30 M			
	2N3409	MD3406		SNM	0.5 A		30 O		0.5	30	0.1 m	250 T		8.0							1000 H			
	2N3410	MD3410		SNM	0.5 A		30 O		0.5	20	10 u	250 T		8.0							1000 H			
	2N3411	MD3410		SNM	0.5 A		30 O		0.5	20	10 u	250 T		8.0							1000 H			
	2N3412			GPA	0.06 A		20 S		0.1	30	10 m	100 T		3.0					.2		10 m		5/	
	2N3413			SPE	0.4 A		150 O			10	50 m	0.25 T		60						6.0	10 K		5/	
	2N3414	MPS6513		SNA	0.36 A		25 O		0.5	75	2.0 m								.3		50 m			
	2N3415	MPS6515		SNA	0.36 A		25 O		0.5	180	2.0 m								.3		50 m			
	2N3416	MPS6515		SNA	0.36 A		50 O		0.5	75	2.0 m								.3		50 m			
	2N3417	MPS6515		SNA	0.36 A		50 O		0.5	180	2.0 m								.3		50 m			
	2N3418	2N5334		SNG	0.8 A		60 O		3.0	20	1.0 A	40 T		130	300/1200				.25		1.0 A		5/	
	2N3419	2N5335		SNG	0.8 A		80 O		3.0	20	1.0 A	40 T		130	300/1200				.25		1.0 A		5/	
	2N3420	2N5336		SNG	0.8 A		60 O		3.0	40	1.0 A	40 T		130	300/1200				.25		1.0 A		5/	
	2N3421	2N5336		SNG	0.8 A		80 O		3.0	40	1.0 A	40 T		130	300/1200				.25		1.0 A		5/	
	2N3423	MD918		SNM	0.3 A		15 O		0.05	20	3.0 m	600 T		1.7					.4		10 m			
	2N3424	MD918		SNM	0.3 A		15 O		0.05	20	3.0 m	600 T		1.7					.4		10 m			
★	2N3425		1	SNG	0.3 A		15 O			30	10 m	300 T		6.0	50/90				.4		10 m		78/654	
	2N3426			SNS	0.6 A		12 O		1.0	30	0.3 A	450 T		15	15/25				.33		.3 A			
★	2N3427		1	GPE	0.2 A		30 R		0.5	100	0.1 A	4.0 T		20						10	1000 H		5/31	
★	2N3428		1	GPE	0.2 A		30 R		0.5	150	0.1 A	5.0 T		20						10	1000 H		5/31	
	2N3429	2N5877		SNG	150 C		50 O		5.0	10	5.0 A	0.2 E			5K/12K				1.0		5.0 A			
	2N3430	2N5632		SNG	150 C		100 O		5.0	10	5.0 A	0.2 E			5K/12K				1.0		5.0 A			
	2N3431	2N5634		SNG	150 C		150 O		5.0	10	5.0 A	0.2 E			5K/12K									
	2N3432			SNG	150 C		200 O		5.0	10	5.0 A	0.2 E			5K/12K									
	2N3433			SNG	150 C		250 O		5.0	10	5.0 A	0.2 E			5K/12K				1.0		5.0 A			
D	2N3435			SNP	1.0 A		60 O		0.25	50	10 m	140 T		5.0					10		70 M		5/	
	2N3436	THRU		FET	Table 9																			
★	2N3438			FET	Table 9																			
★	2N3439		1	SNA	1.0 A		350 O		1.0	40	20 m	15 T		10									5/31	
★	2N3440		1	SNA	1.0 A		250 O		1.0	40	20 m	15 T		10									5/31	
	2N3441			SNA	25 C		140 O		3.0	20	0.5 A	0.2 T							6.0		2.7 A			
	2N3442			SNA	100 C		140 O		10	20	3.0 A	80 T							5.0		10 A		3/	
D	2N3443			GPA	0.3 A		15 O		0.1	20	10 m	750 T		2.5									5/	
★	2N3444			SNG	1.0 A		50 O			20	0.5 A	150 T		12	50/70				.35		.15 A		5/31	
★	2N3445		1	SNG	115 C		60 O		7.5	20	3.0 A	10 T		400	350/2350				1.5		3.0 A		3/11	
★	2N3446		1	SNG	115 C		80 O		7.5	20	3.0 A	10 T		400	350/2350				1.5		3.0 A		3/11	
★	2N3447		1	SNG	115 C		60 O		7.5	40	5.0 A	10 T		400	350/2350				1.5		5.0 A		3/11	
★	2N3448		1	SNG	115 C		80 O		7.5	40	5.0 A	10 T		400	350/2350				1.5		5.0 A		3/11	
	2N3449			GPG	0.15 A		6 O		0.1	20	10 m	300 T		5.0	55/120				.2		2.0 m		18/	
D	2N3450			SNG	0.6 A		60 O		0.8	40	.15 A	100 T		15	200/235				.5		.15 A		5/	

	TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	h_{FE} @ I_C Max	I_C Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C / I_B & I_C	Unit	PACKAGE To-Case No. No.
	2N3452	THRU		FET	Table 9																
	2N3460			FET	Table 9																
	2N3461			GPA	5.0	C	30	O	3.0	90	0.5	A	0.9	E				.4	1.0	A	
D	2N3462			SNE	0.3	A	35	O	0.03	100	10	u	10	T	6.0				6.0	2000 H	18/
D	2N3463			SNE	0.3	A	45	O	0.03	120	10	u	45	T	6.0				3.0	2000 H	18/
	2N3464	2N5334		SNA	5.0	C	40	O	5.0	35	0.2	A	30	T				1.0	.2	A	5/
★	2N3465			FET	Table 9																
★	2N3466			FET	Table 9																
★	2N3467		1	SPG	1.0	A	40	O	1.0	40	0.5	A	175	T	25	10/90		.3	.15	A	5/31
★	2N3468		1	SPG	1.0	A	50	O	1.0	25	0.5	A	150	T	25	10/90		.35	.15	A	5/31
	2N3469	2N5337		SNA	1.25	A	25	O	5.0	100	0.5	A	20	T	150			.5	1.0	A	5/
	2N3470	2N6057		SNA	150	C	50	O	10	100	9.0	A	0.7	E				3.5	9.0	A	
	2N3471	2N6059		SNA	150	C	100	O	10	100	9.0	A	0.7	E				3.5	9.0	A	
	2N3472			SNA	150	C	150	O	10	100	9.0	A	0.7	E				3.5	9.0	A	
	2N3473			SNA	150	C	200	O	10	100	9.0	A	0.7	E				3.5	9.0	A	
	2N3474	2N6055		SNA	150	C	50	O	10	700	4.0	A	2.8	E				3.5	9.0	A	
	2N3475			SNA	150	C	100	O	10	700	4.0	A	2.8	E				3.5	9.0	A	
	2N3476			SNA	150	C	150	O	10	700	4.0	A	2.8	E				3.5	9.0	A	
	2N3477			SNA	150	C	200	O	10	700	4.0	A	2.8	E				3.5	9.0	A	
	2N3478			SNF	0.2	A	15	O		25	2.0	m	750	T	2.0			11	4.5	200 M	
★	2N3479	THRU		UJT	Table 8																
★	2N3484			UJT	Table 8																
★	2N3485		1	SPS	2.0	C	40	O	0.6	40	.15	A	200	T	8.0	45/100		.4	.15	A	46/26
★	2N3485A		1	SPS	2.0	C	60	O	0.6	40	.15	A	200	T	8.0	45/100		.4	.15	A	46/26
★	2N3486		1	SPS	2.0	C	40	O	0.6	100	.15	A	200	T	8.0	45/100		.4	.15	A	46/26
★	2N3486A		1	SPS	2.0	C	60	O	0.6	100	.15	A	200	T	8.0	45/100		.4	.15	A	46/26
★	2N3487		1	SNG	115	C	60	O	7.5	20	3.0	A	10	T	550	350/2350					61/9
★	2N3488		1	SNG	115	C	80	O	7.5	20	3.0	A	10	T	550	350/2350		.3	1.0	A	61/9
★	2N3489		1	SNG	115	C	100	O	7.5	15	3.0	A	10	T	550	350/2350		.3	1.0	A	61/9
★	2N3490		1	SNG	115	C	60	O	7.5	40	5.0	A	10	T	550	350/2350		.3	1.0	A	61/9
★	2N3491		1	SNG	115	C	80	O	7.5	40	5.0	A	10	T	550	350/2350		.3	1.0	A	61/9
★	2N3492		1	SNG	115	C	100	O	7.5	30	5.0	A	10	T	550	350/2350		.3	1.0	A	61/9
	2N3493			SNA	0.15	A	8	O	.025	40	0.5	m	400	T	0.7			.15	10	u	
★	2N3494			SPG	0.6	A	80	O	0.1	35	0.1	A	200	T	7.0	300/1000		.3	10	m	5/31
★	2N3495			SPG	0.6	A	120	O	0.1	35	0.1	m	150	T	6.0	300/1000		.35	10	m	5/31
★	2N3496		1	SPG	0.4	A	80	O	0.1	35	0.1	A	200	T	7.0	300/1000		.3	10	m	18/22
★	2N3497		1	SPG	0.4	A	120	O	0.1	35	0.1	m	150	T	6.0	300/1000		.35	10	m	18/22
★	2N3498			SNA	1.0	A	100	O	0.5	40	.15	A	150	T	10			.2	10	m	5/31
★	2N3499			SNA	1.0	A	100	O	0.5	100	.15	A	150	T	10			.2	10	m	5/31
★	2N3500			SNA	1.0	A	150	O	0.3	40	.15	A	150	T	8.0			.2	10	m	5/31
★	2N3501			SNA	1.0	A	150	O	0.3	100	.15	A	150	T	8.0			.2	10	m	5/31
	2N3502	2N2905S		SPE	0.7	A	45	O	0.6	115	50	m	200	T	8.0	40/100			4.0	2000 H	5/
	2N3503	2N2905AS		SPE	0.7	A	60	O	0.6	115	50	m	200	T	8.0	40/100			4.0	2000 H	5/
	2N3504	2N2907		SPE	0.4	A	45	O	0.6	115	50	m	200	T	8.0	40/100			4.0	2000 H	18/
	2N3505	2N2907A		SPE	0.4	A	60	O	0.6	115	50	m	200	T	8.0	40/100			4.0	2000 H	18/
★	2N3506			SNG	1.0	A	40	O	3.0	40	1.5	A	60	T	40	45/90		1.0	1.5	A	5/31
★	2N3507			SNG	1.0	A	50	O	3.0	30	1.5	A	60	T	40	45/90		1.0	1.5	A	5/31
★	2N3508		1	SNS	0.4	A	20	O	0.5	40	10	m	500	T	4.0	12/18		.25	10	m	46/26
★	2N3509		1	SNS	0.4	A	20	O	0.5	100	10	m	500	T	4.0	12/18		.25	10	m	46/26
★	2N3510		1	SNS	0.36	A	10	O	0.5	25	.15	A	350	T	4.0	20/25		.25	10	m	52/27
★	2N3511		1	SNS	0.36	A	15	O	0.5	30	.15	A	450	T	4.0	16/18		.25	10	m	52/27
	2N3512	2N5859		SNS	0.8	A	35	O		10	0.5	A	250	T	10	30/45		1.0	.5	A	5/
	2N3513	2N2480A		SNA	0.25	A	40	O	0.5	50	1.0	m	50	T	18				8.0	1.0 K	
D	2N3514	2N2480A		SNA	0.25	A	40	O	0.5	50	1.0	m	50	T	18				8.0	1.0 K	
D	2N3515	MD2219AF		SNM	0.25	A	40	O	0.5	50	1.0	m	50	T	18					1.0 K	
	2N3516			SNA	0.25	A	60	O	0.5	50	1.0	m	60	T	15				8.0	1.0 K	
D	2N3517			SNA	0.25	A	60	O	0.5	50	1.0	m	60	T	15				8.0	1.0 K	
D	2N3518	MD2219AF		SNM	0.25	A	60	O	0.5	50	1.0	m	60	T	15					1.0 K	
D	2N3519			SNA	0.25	A	30	O	0.05	150	1.0	m	60	T	8.0				7.0	2000 H	
D	2N3520			SNA	0.25	A	30	O	0.05	150	1.0	m	60	T	8.0				7.0	2000 H	
	2N3521			SNA	0.3	A	55	O	0.05	100	10	u	30	T	8.0				7.0	2000 H	
D	2N3523			SNA	0.25	A	55	O	0.05	100	10	u	30	T	8.0				7.0	2000 H	
D	2N3524			SNA	0.25	A	55	O	0.05	100	10	u	30	T	8.0				7.0	2000 H	
	2N3525			THY	Table 6																
	2N3526	2N3501		SNA	0.8	A	120	O		30	30	m	40	T	12			1.0	50	m	5/
	2N3527			SPA	0.4	A	30	O	0.1	25	0.1	m	5.0	T	10						46/
	2N3528	THRU		THY	Table 6																
	2N3541			THY	Table 6																
	2N3543			SNA	60	C	60	O	5.0	10	4.5	A	150	T	100			1.0	4.5	A	3/
★	2N3544		1	SNA	0.3	A	25	S	0.1	25	10	m	600	T	2.5						18/22

	TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	t_{on} ns Max	ΔV_{BE} mV Max	t_{off} ns Max	Gp dB Min	$V_{CE(sat)}$ Volts Max	NF @ f dB Max	I_C & I_B	I_C	Unit	PACKAGE To-Case No.	No.
	2N3545			SPG	0.36	A	20	O	0.2	40	10 m	250	T	8.0		60/90			.2				10 m		18/	
★	2N3546		1	SPS	0.36	A	12	O	0.2	30	10 m	700	T	6.0		40/30			.15				10 m		18/22	
	2N3547			SPE	0.36	A	60	O	0.1	100	1.0 m	45	T	8.0							5.0		1000	H	18/	
★	2N3548			SNS	0.4	A	15	O	0.5	30	.15 A	450	T	4.0		16/18			1.0				10 m		46/26	
	2N3548			SPE	0.4	A	45	O	0.1	100	10 u	60	T	8.0							4.0		1000	H	18/	
	2N3549			SPE	0.4	A	60	O	0.1	100	10 u	60	T	8.0							4.0		1000	H	18/	
	2N3550			SPE	0.4	A	45	O	0.1	200	10 u	60	T	8.0							4.0		1000	H	18/	
	2N3551			SNG	40	C	60	O	12	20	10 A	40	T	850		300/2500			1.0				10 A			
	2N3552			SNG	40	C	80	O	12	20	10 A	40	T	850		300/2500			1.0				10 A			
★	2N3553		1	SNP	7.0	C	40	O	1.0	10	.25 A	400	T	10		2.5/			10				175	M	39/79	
	2N3554			SNG	0.8	A	30	O	1.2	25	.75 A	150	T	25		50/105			.7				.75	A	5/	
	2N3555	THRU		THY	Table 6																					
	2N3562			THY	Table 6																					
	2N3563			SNH	0.2	A	12	O	0.05	20	8.0 m	600	T	1.7					14				200	M	92/	
	2N3564			SNA	0.2	A	15	O	0.1	20	15 m	400	T	3.5					.3				20 m			
	2N3565	MPS6514		SNA	0.2	A	25	O	0.05	150	1.0 m	40	T	4.0												
	2N3566	MPS6514		SNA	0.3	A	30	O	0.2	150	10 m	40	T	25					1.0				.1 A			
	2N3567	MPS6530		SNA	0.3	A	40	O	0.5	40	.15 A	60	T	20					.25				.15 A		105/	
	2N3568			SNA	0.3	A	60	O	0.5	40	.15 A	60	T	20					.25				.15 A		105/	
	2N3569	MPS6531		SNA	0.3	A	40	O	0.5	100	.15 A	60	T	20					.25				.15 A		105/	
	2N3570			SNE	0.2	A	15	O	0.05	20	5.0 m	1500	T								7.0					
	2N3572			SNF	0.2	A	13	O	0.05	20	5.0 m	1000	T						450		6.0		450	M		
	2N3573			FET	Table 9																					
	2N3576	2N3251		SPS	0.36	A	15	O		40	10 m	400	T	4.5		30/50			.15				10 m		18/	
D	2N3577			SNA	85	C	80	O	2.0	12	1.0 A	10	T						5.2				1.0 A		53/	
	2N3578			FET	Table 9																					
	2N3579	2N3799		SPE	0.4	A	60	O	0.03	30	1.0 m	80	T	6.0							4.0		AUD		46/	
	2N3581	2N3799		SPE	0.4	A	40	O	0.03	50	0.1 m	30	T	6.0							3.0		AUD		46/	
	2N3582	2N3799		SPE	0.4	A	40	O	0.03	100	0.1 m	30	T	6.0							3.0		AUD		46/	
★	2N3583		1	SNA	35	C	175	O	1.0	40	0.5 A	10	T	120					5.0				1.0 A		66/80	
★	2N3584			SNG	35	C	250	O	2.0	8.0	1.0 A	10	T	120		3000/7000			.75				1.0 A		66/80	
★	2N3585		1	SNG	35	C	300	O	2.0	8.0	1.0 A	10	T	120		3000/7000			.75				1.0 A		66/80	
D	2N3586			SPC	.125	A	45	O	0.1			0.1	T	18												
	2N3587			SNA	0.3	A	45	O	0.5	80	1.0 m	80	T	8.0							10		AUD			
	2N3588			GPA	0.1	A	25	B	0.01	20	1.0 m	200	T													
	2N3589	2N3738		SNA	2.0	A	200	R	0.5	30	0.2 A	15	T						2.0				.2 A			
	2N3590	2N6233		SNA	2.0	A	200	R	0.5	75	0.2 A	15	T						2.0				.2 A			
	2N3591			SNA	1.0	A	200	R	0.5	30	0.2 A	15	T						2.0				.2 A			
	2N3592			SNA	1.0	A	200	R	0.5	75	0.2 A	15	T						2.0				.2 A			
	2N3593			SNA	1.0	A	200	R	0.5	30	0.2 A	15	T						2.0				.2 A			
	2N3594			SNA	1.0	A	200	R	0.5	75	0.2 A	15	T						2.0				.2 A			
	2N3595			SNA	1.5	A	200	R	0.5	30	0.2 A	15	T						2.0				.2 A			
	2N3596			SNA	1.5	A	200	R	0.5	75	0.2 A	15	T						2.0				.2 A			
	2N3597	MJ7000		SNG	100	C	40	O	20	40	10 A	30	T	700		700/2700			.5				10 A		63/	
	2N3598	MJ7000		SNG	100	C	60	O	20	40	10 A	30	T	700		700/2700			.5				10 A		63/	
	2N3599	MJ7000		SNG	100	C	80	O	20	40	10 A	30	T	700		700/2700			.5				10 A		63/	
	2N3600			SNF	0.2	A	15	O		20	3.0 m	850	T						17		4.5		200	M	72/	
D	2N3601			GPG	.286	C	40	O	3.5	60	1.0 A	20	T			1300/2700			.2				.1 A			
D	2N3602			GPG	.286	C	40	O	3.5	60	1.0 A	20	T			1300/2700			.2				.1 A			
	2N3603			GPG	.286	C	55	O	3.5	60	1.0 A	20	T			1300/2700			.2				.1 A			
D	2N3604			GPG	.286	C	55	O	3.5	60	1.0 A	20	T			1300/2700			.2				.1 A			
	2N3605	MPS3646		SNS	0.2	A	14	O	0.2	30	10 m	300	T	6.0		35/45			.25				10 m			
	2N3605A			SNS	0.32	A	15	O	0.2	30	10 m	300	T	6.0		35/45			.25				10 m		98/	
	2N3606	MPS3646		SNG	0.2	A	14	O	0.2	30	10 m	300	T	6.0		40/60			.25				10 m			
	2N3606A			SNG	0.32	A	15	O	0.2	30	10 m	300	T	6.0		40/60			.25				10 m		98/	
D	2N3608	THRU		FET	Table 9																					
★	2N3610			FET	Table 9																					
★	2N3611		1	GPA	85	C	30	S	7.0	35	3.0 A	0.3	T						.25				3.0 A		3/11	
★	2N3612		1	GPA	85	C	45	S	7.0	35	3.0 A	0.3	T						.25				3.0 A		3/11	
★	2N3613		1	GPA	85	C	30	S	7.0	60	3.0 A	0.3	T						.25				3.0 A		3/11	
★	2N3614		1	GPA	85	C	45	S	7.0	60	3.0 A	0.3	T						.25				3.0 A		3/11	
★	2N3615		1	GPA	85	C	60	S	7.0	30	3.0 A	0.3	T						.25				3.0 A		3/11	
★	2N3616		1	GPA	85	C	75	S	7.0	30	3.0 A	0.3	T						.25				3.0 A		3/11	
★	2N3617		1	GPA	85	C	60	S	7.0	45	3.0 A	0.3	T						.25				3.0 A		3/11	
★	2N3618			GPA	85	C	75	S	7.0	45	3.0 A	0.3	T						.25				3.0 A		3/11	
	2N3619			SNP	7.5	C	40	O	2.5	40	1.0 A	200	T	50					7.5				50	M		
	2N3620			SNP	7.5	C	40	O	5.0	40	1.0 A	200	T	50					7.5				50	M		
	2N3621			SNP	30	C	40	O	5.0	40	1.0 A	200	T	50					6.0				50	M		
	2N3622			SNP	30	C	40	O	5.0	40	1.0 A	200	T	50					6.0				50	M	61/	
	2N3623			SNP	7.5	C	40	O	2.5	40	1.0 A	200	T	50					7.5				50	M	61/	

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min @ V_{CE} (sat) Volts Max	NF dB Max @ I_C / I_B & I_C	Unit	PACKAGE To-Case No. No.
2N3624			SNP	7.5 C		40	0	5.0	40	1.0 A	200 T		50			7.5		50 M	
2N3625			SNP	30 C		40	0	5.0	40	1.0 A	200 T		50			6.0		50 M	
2N3626			SNP	30 C		40	0	5.0	40	1.0 A	200 T		50			6.0		50 M	61/
2N3627			SNP	7.5 C		50	0	2.5	40	1.0 A	200 T		50			7.5		50 M	61/
2N3628			SNP	7.5 C		50	0	5.0	40	1.0 A	200 T		50			7.5		50 M	
2N3630			SNP	30 C		50	0	5.0	40	1.0 A	200 T		50			6.0		50 M	61/
★ 2N3631			FET	Table 9															
★ 2N3632		1	SNP	23 C		40	0	3.0	10	.25 A	250 T		25			5.8		175 M	
2N3633			SNS	0.3 A		6	0	0.05	50	10 m	1300 T		2.5	*9.0/9.0*	*.21*			*3.0 m*	60/36
★ 2N3634			SPG	1.0 A		140	0	1.0	50	50 m	150 T		10	*400/600*				1000 H	18/
★ 2N3635			SPG	1.0 A		140	0	1.0	100	50 m	200 T		10	*400/600*				1000 H	5/31
★ 2N3636			SPG	1.0 A		175	0	1.0	50	50 m	150 T		10	*400/600*				1000 H	5/31
★ 2N3637			SPG	1.0 A		175	0	1.0	100	50 m	200 T		10	*400/600*				1000 H	5/31
2N3638			SPG	0.3 A		25	0	0.5	30	50 m	100 T		20	*75/170*	*.25*			*50 m*	92/
2N3638A			SPG	0.3 A		25	0	0.5	100	50 m	150 T		10	*75/170*	*.25*			*50 m*	92/
2N3639	MPS3639		SPG	0.2 A		6	0	0.08	30	10 m	500 T		3.5	*25/60*	*.16*			*10 m*	92/
2N3640	MPS3640		SPG	0.2 A		12	0	0.08	30	10 m	500 T		3.5	*25/60*	*.2*			*10 m*	92/
2N3641	MPS6530		SNP	0.35 A		30	0	0.5	40	.15 A	150 T		8.0			10		30 M	
2N3642	MPS6530		SNP	0.35 A		45	0	0.5	40	.15 A	150 T		8.0			10		30 M	
2N3643	MPS6531		SNP	0.35 A		30	0	0.5	100	.15 A	250 T		8.0			10		30 M	
2N3644			SPG	0.3 A		45	0	0.5	80	50 m	200 T		8.0	*40/100*	*.25*			*50 m*	
2N3645			SPG	0.3 A		60	0	0.5	80	50 m	200 T		8.0	*40/100*	*.25*			*50 m*	
2N3646	MPS3646		SNS	0.2 A		15	0	0.2	30	30 m	350 T		5.0	*18/28*	*.2*			*30 m*	92/
★ 2N3647		1	SNS	0.4 A		10	0	0.5	25	.15 A	350 T		4.0	*20/25*	*.25*			*10 m*	46/26
2N3649	THRU		THY	Table 6															
2N3658			THY	Table 6															
2N3659			SNA	4.0 C		170	0	0.5	20	10 m	50 T		6.0						5/
2N3660	2N3719		SPA	5.0 C		30	0	1.5	25	0.5 A	25 T		275			*1.2*		*.5 A*	5/
2N3661	2N3720		SPA	5.0 C		50	0	1.5	25	0.5 A	25 T		275			*1.2*		*.5 A*	5/
2N3662			SNF	0.2 A		12	0	.025	20	8.0 m	700 T		1.7				6.5	60 M	
2N3663			SNF	0.2 A		12	0	.025	20	8.0 m	700 T		1.7				6.5	60 M	
2N3664		1	SNP	5.0 C		60	S	0.5	8.0	50 m	300 T		60			7.4		250 M	
2N3665	2N5335		SNA	5.0 C		80	0	1.0	40	.15 A	60 T		12			*.5*		*.15 A*	5/
2N3666			SNA	5.0 C		80	0	1.0	100	.15 A	60 T		12			*.5*		*.15 A*	5/
2N3667	2N5881		SNS	117 C		50	0	15	15	8.0 A	0.5 T			*6.0/12*		*1.5*		*8.0 A*	
2N3668			THY	Table 6															
2N3669			THY	Table 6															
2N3671	2N2905S		SPG	0.6 A		50	0	0.6	75	.15 A	200 T		9.0	*45/100*		*.4*		*.15 A*	5/
2N3672			SPG	0.4 A		50	0	0.6	75	.15 A	200 T		9.0	*45/100*		*.4*		*.15 A*	18/
★ 2N3673		1	SPG	0.35 A		50	0	0.6	75	.15 A	200 T		9.0	*45/100*		*.4*		*.15 A*	46/
2N3675	2N4238		SNG	8.8 C		55	0	3.0	12	1.0 A	1.0 T			*5K/10K*		*.8*		*1.0 A*	5/
2N3676	2N4239		SNG	8.8 C		90	0	3.0	12	1.0 A	1.0 T			*5K/10K*		*.8*		*1.0 A*	5/
★ 2N3677			SPA	0.4 A		20	0	0.1			5.0 T		10						46/
2N3678	2N3019		SNC	0.8 A		55	0	0.8	40	.15 A	250 T		8.0			*.4*		*.15 A*	
2N3679			UJT	Table 8															
2N3681			SNA	0.2 A		7	0		20	2.0 m	1000 T					*.37*		*4.0 m*	
2N3683			SNF	0.2 A		12	0	0.03	20	8.0 m	1000 T					17	4.0	200 M	72/
2N3684,A			FET	Table 9															
2N3687,A			FET	Table 9															
2N3688			SNH	0.2 A		40	0	0.03	30	4.0 m	400 T		1.6			29		45 M	
2N3689			SNH	0.2 A		40	0	0.03	30	4.0 m	400 T		1.6			29		45 M	
2N3690			THY	Table 6															
2N3691	MPS6512		SNA	0.2 A		20	0	0.03	40	10 m	200 T		3.5			*.7*		*10 m*	
2N3692	MPS6513		SNA	0.2 A		20	0	0.03	100	10 m	200 T		3.5			*.7*		*10 m*	
2N3693			SNA	0.2 A		45	0	0.03	40	10 m	200 T		6.0						92/
2N3695			FET	Table 9															
2N3698			FET	Table 9															
2N3700	2N2896		SNE	0.5 A		80	0	1.0	100	.15 A	100 T		12				4.0	1000 H	18/
2N3701	2N3019		SNA	0.5 A		80	0	1.0	40	.15 A	80 T		12			*.2*		*.15 A*	18/
2N3702	2N3250		SPA	0.3 A		25	0	0.2	60	50 m	100 T		12			*.25*		*50 m*	92/
2N3704	2N2222A		SNA	0.36 A		30	0	0.8	100	50 m	100 T		12			*.6*		*.1 A*	92/
2N3705	2N2222A		SNA	0.36 A		30	0	0.8	50	50 m	100 T		12			*.8*		*.1 A*	92/
2N3706	2N930		SNA	0.36 A		20	0	0.8	30	50 m	100 T		12			*1.0*		*.1 A*	92/
2N3707			SNE	0.25 A		30	0	0.03	100	0.1 m							5.0	AUD	92/
2N3708			SNA	0.25 A		30	0	0.03	45	1.0 m						*1.0*		*10 m*	92/
2N3709			SNA	0.25 A		30	0	0.03	45	1.0 m						*1.0*		*10 m*	92/
2N3710			SNA	0.25 A		30	0	0.03	90	1.0 m						*1.0*		*10 m*	92/
2N3711			SNA	0.25 A		30	0	0.03	180	1.0 m						*1.0*		*10 m*	92/
★ 2N3712			SNA	0.8 A		150	0	0.2	30	30 m	40 T		9.0			*2.0*		*50 m*	5/31
★ 2N3713		1	SNA	150 C		60	0	10	25	1.0 A	0.75 E		250			*1.0*		*5.0 A*	3/11

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min	NF dB Max @ V_{CE} (sat) Volts Max	I_C & I_B	f Unit @ I_C	PACKAGE To-Case No.	No.
★ 2N3714		1	SNA	150 C		80 O		10	25	1.0 A	0.75	E	250				1.0		5.0 A	3/11	
★ 2N3715		1	SNA	150 C		60 O		10	50	1.0 A	1.5	E	250				.8		5.0 A	3/11	
★ 2N3716		1	SNA	150 C		80 O		10	50	1.0 A	1.5	E	250				.8		5.0 A	3/11	
D 2N3717			SNF	7.5 C		60 S		1.0	2.0	0.5 A	250	T	10					7.0	175 M	39/	
2N3718			SNF	10 C		60 S		1.0	2.0	0.5 A	250	T	10					7.0	175 M		
★ 2N3719		1	SPG	6.0 C		40 O		3.0	25	1.0 A	60	T	120	75K/225K		1.5			.3 A	5/31	
★ 2N3720		1	SPG	6.0 C		60 O		3.0	25	1.0 A	60	T	120	75K/225K		1.5			3.0 A	5/31	
2N3721	MP3731		SNA	0.2 A		18 O		0.1					12								
2N3722			SNG	0.8 A		60 O		0.5	40	0.1 A	300	T	10	50/100		.22			.1 A	5/	
2N3723			SNG	0.8 A		80 O		0.5	40	0.1 A	300	T	9.0	70/130		.25			10 m	5/	
★ 2N3724	MM3724	1	SNG	0.8 A		30 O		0.5	60	0.1 A	300	T	12	35/60		.2			.1 A	39/79	
2N3724A			SNG	1.0 A		30 O		1.2	60	100 m	300	T		35/60		.2			100 m	5/	
★ 2N3725	MM3725	1	SNG	0.8 A		50 O		0.5	60	0.1 A	300	T	10	35/60		.26			.1 A	39/79	
2N3725A			SNG	1.0 A		50 O		1.2	60	100 m	300	T		35/60		.25			100 m	5/	
★ 2N3726		1	SPA	0.4 A		45 O		0.6	135	1.0 m	200	T	8.0					4.0	1000 H	/654	
★ 2N3727		1	SPA	0.4 A		45 O		0.6	135	1.0 m	200	T	8.0					4.0	1000 H	/654	
2N3728	2N5793		SNM	0.45 A		30 O		0.5	80	.15 A	250	T	8.0						AUD		
2N3729	2N5794		SNM	0.45 A		30 O		0.5	80	.15 A	250	T	8.0						AUD		
2N3730			GPA	10 A		200 S		3.0	10	50 m	1.0	T								3/	
2N3731			GPA	5.0 A		320 S		10	15	6.0 A										3/	
2N3732			GPA	3.0 A		100 S		3.0	35	0.7 A	1.0	T								3/	
2N3733			SNA	23 C		40 O		1.0	10	.25 A	250	T	25			1.0			1.0 A	60/	
★ 2N3734			SNG	1.0 A		30 O		1.5	30	1.0 A	300	T	9.0	48/60		.2			10 m	39/79	
2N3734A	2N5334		SNA	1.0 A		30 O		1.5	30	1.0 A			9.0			.9			1.0 A	5/	
★ 2N3735			SNG	1.0 A		50 O		1.5	20	1.0 A	250	T	9.0	48/60		.2			10 m	39/79	
2N3735A			SNA	1.0 A		50 O		1.5	20	1.0 A			8.0			.9			1.0 A	5/	
★ 2N3736		1	SNG	0.5 A		30 O		1.5	30	1.0 A	300	T	9.0	48/60		.2			10 m	46/26	
2N3736A			SNA	0.5 A		30 O		1.5	30	1.0 A			9.0			.9			1.0 A	46/	
★ 2N3737		1	SNG	0.5 A		50 O		1.5	20	1.0 A	250	T	9.0	48/60		.2			10 m	46/26	
2N3737A			SNA	0.5 A		50 O		1.5	20	1.0 A			8.0			.9			1.0 A	46/	
★ 2N3738			SNA	20 C		225 O		0.25	40	0.1 A	15	T	20			2.5			.25 A	66/80	
★ 2N3739		1	SNA	20 C		300 O		0.25	40	0.1 A	15	T	20			2.5			.25 A	66/80	
★ 2N3740		1	SPS	25 C		60 O		4.0	30	.25 A	4.0	T	100	/100							
★ 2N3740,A			SPS	25 C		60 O		4.0	30	.25 A	4.0	T	4.0	/100						66/80	
★ 2N3741		1	SPS	25 C		80 O		4.0	30	.25 A	4.0	T	100	/100							
★ 2N3741,A			SPS	25 C		80 O		4.0	30	.25 A	4.0	T	4.0	/100						66/80	
★ 2N3742			SNA	1.0 A		300 O		0.05	20	30 m	30	T	6.0			1.0			10 m	5/	
★ 2N3743			SPA	1.0 A		300 O		0.05	25	30 m	30	T	15			5.0			10 m	39/79	
2N3744	2N5346		SNS	30 C		40 O		5.0	20	1.0 A	30	T	150	120/140		.25			1.0 A		
2N3745	2N5346		SNS	30 C		60 O		5.0	20	1.0 A	30	T	150	120/140		.25			1.0 A		
2N3746	2N5346		SNS	30 C		80 O		5.0	20	1.0 A	30	T	150	120/140		.25			1.0 A		
2N3747	2N5347		SNS	30 C		40 O		5.0	40	1.0 A	40	T	150	80/140		.25			1.0 A		
2N3748	2N5347		SNS	30 C		60 O		5.0	40	1.0 A	40	T	150	80/140		.25			1.0 A		
2N3749	2N5348		SNS	30 C		80 O		5.0	40	1.0 A	40	T	150	80/140		.25			1.0 A		
2N3750	2N5348		SNS	30 C		40 O		5.0	100	1.0 A	50	T	150	80/140		.25			1.0 A		
2N3751	2N5348		SNS	30 C		60 O		5.0	100	1.0 A	50	T	150	80/140		.25			1.0 A		
2N3752	2N5348		SNS	30 C		80 O		5.0	100	1.0 A	50	T	150	80/140		.25			1.0 A		
★ 2N3753	THRU		THY	Table 6																	
★ 2N3761			THY	Table 6																	
★ 2N3762			SPG	1.0 A		40 O		1.5	30	1.0 A	180	T	15	43/115		.1			10 m	5/31	
★ 2N3763			SPG	1.0 A		60 O		1.5	20	1.0 A	150	T	15	43/115		.1			10 m	5/31	
★ 2N3764			SPG	0.5 A		40 O		1.5	30	1.0 A	180	T	15	43/115		.1			10 m	46/26	
★ 2N3765		1	SPG	0.5 A		60 O		1.5	20	1.0 A	150	T	15	43/115		.1			10 m	46/26	
★ 2N3766		1	SNA	20 C		60 O		4.0	40	0.5 A	15	T	50			2.5			1.0 A	66/80	
★ 2N3767		1	SNA	20 C		80 O		4.0	40	0.5 A	15	T	50			2.5			1.0 A	66/80	
D 2N3770			GPA	0.05 A		6 O		0.05	10	1.0 m	100	T	3.0								
★ 2N3771			SNA	150 C		40 O		15	15	15 A	0.2	T				2.0			15 A	3/	
★ 2N3772			SNA	150 C		60 O		10	15	10 A	0.2	T				1.4			10 A	3/	
★ 2N3773			SNA	150 C		140 O		8.0	15	8.0 A	0.2	T				1.5			8.0 A	3/	
2N3774	2N4234		SPG	5.0 C		40 O		1.0	20	0.2 A	1.0	T		3000/3000		.2			.2 A	5/	
2N3775	2N4235		SPG	5.0 C		60 O		1.0	20	0.2 A	1.0	T		3000/3000		.2			.2 A	5/	
2N3776	2N4236		SPG	5.0 C		80 O		1.0	20	0.2 A	1.0	T		3000/3000		.2			.2 A	5/	
2N3777	2N5679		SPG	5.0 C		100 O		1.0	20	0.2 A	1.0	T		3000/3000		.2			.2 A	5/	
2N3778	2N4234		SPG	5.0 C		40 O		1.0	10	0.2 A	1.0	T		3000/3000		.2			.2 A	5/	
2N3779	2N4235		SPG	5.0 C		60 O		1.0	10	0.2 A	1.0	T		3000/3000		.2			.2 A	5/	
2N3780	2N4236		SPG	5.0 C		80 O		1.0	10	0.2 A	1.0	T		3000/3000		.2			.2 A	5/	
2N3781	2N5679		SPG	5.0 C		100 O		1.0	10	0.2 A	1.0	T		3000/3000		.2			.2 A	5/	
2N3782	2N4234		SPG	5.0 C		40 O		1.0	10	1.0 A	1.0	T		3000/3000		.75			1.0 A	5/	
★ 2N3783			GPF	0.15 A		20 O		0.02	20	3.0 m	800	T	1.0					2.2	200 M	72/	
★ 2N3784			GPF	0.15 A		20 O		0.02	20	3.0 m	700	T	1.0					2.5	200 M	72/	

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C @ I_B	& I_C	Unit	PACKAGE To-Case No. No.
★ 2N3785			GPF	0.15	A	12	O	0.02	15	3.0 m	700	T	1.2				2.9	200	M	72/
2N3788			SNA	100	C	325	O	1.0	20	.50 A	5.0	T	400							
★ 2N3789		1	SPA	150	C	60	O	10	25	1.0 A	0.75	E				1.0		5.0	A	3/11
★ 2N3790		1	SPA	150	C	80	O	10	25	1.0 A	0.75	E				1.0		5.0	A	3/11
★ 2N3791		1	SPA	150	C	60	O	10	50	1.0 A	1.5	E				1.0		5.0	A	3/11
★ 2N3792		1	SPA	150	C	80	O	10	50	1.0 A	1.5	E				1.0		5.0	A	3/11
2N3793	MPS6530		SNA	0.25	A	20	O	0.5	20	10 m	100	T	10			.4		10	m	
2N3794	MPS6531		SNA	0.25	A	20	O	0.5	100	10 m	100	T	10			.4		10	m	
2N3795			SPG	5.0	C	120	O	1.0	12	10 m	0.5	T		5000/5000		.2		10	m	5/
★ 2N3796			FET	Table 9																
★ 2N3797			FET	Table 9																
★ 2N3798		1	SPE	0.36	A	60	O	0.05	150	500 u	30	T	4.0			.2	10	100	u	18/22
2N3798A	2N3798		SPE	0.36	A	90	O	0.05	300	500 u	30	T	4.0			.2	10	100	u	18/22
★ 2N3799		1	SPE	0.36	A	60	O	0.05	150	500 u	30	T	4.0			.2	10	100	u	18/22
2N3799A	2N3799	1	SPE	0.36	A	90	O	0.05	300	500 u	30	T	4.0			.2	10	100	u	18/22
2N3800	2N3806		SPE	0.25	A	60	O	0.05	150	0.1 m	100	T	4.0				7.0	100	H	18/22
2N3801	2N3807		SPE	0.25	A	60	O	0.05	300	0.1 m	100	T	4.0				4.0	100	H	71/
2N3802	2N3808		SPM	0.25	A	60	O	0.05	150	0.1 m	100	T	4.0	/5.0				100	H	71/
2N3803	2N3809		SPM	0.25	A	60	O	0.05	300	0.1 m	100	T	4.0	/5.0				100	H	71/
2N3804	2N3810		SPM	0.25	A	60	O	0.05	150	0.1 m	100	T	4.0	/3.0				100	H	71/
2N3804A	2N3811A		SPM	0.25	C	60	O	0.05	150	100 u	30	T	4.0					1000	H	71/
2N3805	2N3811		SPM	0.25	A	60	O	0.05	300	0.1 m	100	T	4.0	/3.0				100	H	71/
2N3805A	2N3811A		SPM	0.25	C	60	O	0.05	300	100 u	30	T	4.0					1000	H	71/
★ 2N3806		1	SPA	0.5	A	60	O	0.05	150	0.1 m	100	T	4.0			.2	7.0	100	H	/654
★ 2N3807			SPA	0.5	A	60	O	0.05	300	0.1 m	100	T	4.0			.2	4.0	100	H	/654
★ 2N3808			SPM	0.5	A	60	O	0.05	150	0.1 m	100	T	4.0	/5.0		.2		100	H	/654
★ 2N3809		1	SPM	0.5	A	60	O	0.05	300	0.1 m	100	T	4.0	/5.0		.2		100	H	/654
★ 2N3810		1	SPM	0.5	A	60	O	0.05	150	0.1 m	100	T	4.0	/3.0		.2		100	H	/654
★ 2N3810A		1	SPM	0.50	A	60	O	0.05	150	100 u	30	T	4.0			.2		100	u	/654
★ 2N3811		1	SPM	0.5	A	60	O	0.05	300	0.1 m	100	T	4.0	/3.0		.2		100	H	/654
★ 2N3811A		1	SPM	0.50	A	60	O	0.05	300	100 u	30	T	4.0			.2		100	u	/654
★ 2N3812		1	SPM	0.35	A	60	O	0.05	150	0.1 m	100	T	4.0					AUD		/610
★ 2N3813		1	SPA	0.35	A	60	O	0.05	300	0.1 m	100	T	4.0	0.9/5.0			2.5	AUD		/610
★ 2N3814		1	SPM	0.35	A	60	O	0.05	150	0.1 m	100	T	4.0	/5.0				100	H	/610
★ 2N3815			SPM	0.35	A	60	O	0.05	300	0.1 m	100	T	4.0	/5.0				100	H	/610
★ 2N3816		1	SPM	0.35	A	60	O	0.05	150	0.1 m	100	T	4.0	/3.0				100	H	/610
★ 2N3816A		1	SPM	0.25	C	60	O	0.05	150	100 u	30	T	4.0	/1.5				100	H	/610
★ 2N3817		1	SPM	0.35	A	60	O	0.05	300	0.1 m	100	T	4.0	/3.0				100	H	/610
★ 2N3817A		1	SPM	0.25	C	60	O	0.05	300	100 u	30	T	4.0	/1.5				100	H	/610
2N3818		1	SNP	25	C	60	S	2.0	5.0	0.4 A	150	T	40	15/		6.0		100	M	60/36
2N3819	THRU		FET	Table 9																
2N3824			FET	Table 9																
2N3825			SNF	0.25	A	15	O	0.1	20	2.0 m	200	T	3.5				5.5	1	M	
D 2N3826			SNA	0.2	A	45	O	0.03	40	10 m	200	T	3.5							
2N3828	MPS6565		SNA	0.3	A	40	O	0.1	30	12 m	360	T	5.0							
2N3829	2N3250		SPG	0.36	A	20	O	0.2	30	30 m	350	T	6.0	25/65		.18		10	m	52/
2N3830	2N2193		SNG	1.0	A	50	O	1.2	30	.15 A	200	T	12	60/70		.3		.15	A	5/
2N3831	2N2193		SNG	1.0	A	40	O	1.2	35	.15 A	200	T	12	60/70		.3		.15	A	5/
2N3832			SNS	0.2	A	6	O	.035	25	2.0 m	800	T	0.85	35/30		.4		10	m	
2N3833			SNA	1.0	C	15	O	0.1	20	30 m										
2N3834			SNA	1.0	C	15	O	0.1	20	30 m										
2N3835			SNA	1.0	C	15	O	0.1	20	30 m										
2N3836			SNG	1.0	A	60	O	7.0	2K	2.0 A	40	T	60	500/1000		1.8		5.0	A	
2N3837			SNG	1.0	A	80	O	7.0	2K	2.0 A	40	T	60	500/1000		1.8		5.0	A	
★ 2N3838		1	SNE	0.25	A	40	O	0.6	100	.15 A	200	T	8.0	50/340			8.0	1000	H	/610
★ 2N3839		1	SNF	0.2	A	15	O	0.04	30	3.0 m	2000	T	1.0			12	3.9	450	M	72/20
2N3840			SPC	0.4	A	50	O	0.1	30	0.2 m	6.0	T	9.0			.1		5.0	m	46/
2N3841			SPC	0.3	A	100	O	0.1	15	0.2 m	1.5	T	9.0			.15		5.0	m	18/
2N3842			SPC	0.3	A	120	O	0.1	10	1.0 m	1.0	T	9.0							18/
2N3843	MPS6512		SNH	0.2	A	30	O	0.1	20	2.0 m	60	T	4.0			10		2	M	
2N3843A	MPS6512		SNF	0.2	A	30	O	0.1	20	2.0 m	60	T	4.0				8.5	2	M	
2N3844	MPS6512		SNH	0.2	A	30	O	0.1	35	2.0 m	90	T	4.0			10		2	M	
2N3844A	MPS6512		SNF	0.2	A	30	O	0.1	35	2.0 m	90	T	4.0				8.5	2	M	
2N3845	MPS6512		SNH	0.2	A	40	O	0.1	60	2.0 m	126	T	4.0			10		2	M	
2N3845A	MPS6513		SNF	0.2	A	30	O	0.1	60	2.0 m	126	T	4.0				8.5	2	M	
2N3846			SNA	4.0	A	200	O	20	10	10 A	10	T	750			.75		10	A	63/
2N3847			SNA	4.0	A	300	O	20	10	10 A	10	T	750			.75		10	A	63/
2N3848			SNA	4.0	A	300	O	20	10	15 A	10	T	750			1.0		15	A	63/
2N3849			SNA	4.0	A	300	O	20	10	15 A	10	T	750			1.0		15	A	63/
2N3850			SNS	30	C	80	O	5.0	50	1.0 A	20	T	125	200/900		.25		1.0	A	59/

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TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE}-Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / @ I_B	& I_C	Unit	PACKAGE To-Case No. No.
2N3851			SNS	30	C	80	0	5.0	30	1.0	A	20	T	125	*200/900*		.25		*1.0*	*A*	59/
2N3852			SNS	30	C	40	0	5.0	50	1.0	A	20	T	125	*200/900*		.25		*1.0*	*A*	59/
2N3853			SNS	30	C	40	0	5.0	30	1.0	A	20	T	125	*200/900*		.25		*1.0*	*A*	59/
2N3854	MPS6512		SNA	0.2	A	18	0	0.1	35	2.0	m	100	T	3.5							
2N3854A	MPS6512		SNA	0.2	A	30	0	0.1	35	2.0	m	100	T	3.5							
2N3855	MPS6512		SNA	0.2	A	18	0	0.1	60	2.0	m	130	T	3.5							
2N3855A	MPS6512		SNA	0.2	A	30	0	0.1	60	2.0	m	130	T	3.5							
2N3856	MPS6513		SNA	0.2	A	18	0	0.1	100	2.0	m	140	T	3.5							
2N3856A	MPS6513		SNA	0.2	A	30	0	0.1	100	2.0	m	140	T	3.5							
2N3857			SPA	0.6	A	45	0	0.5	50	1.0	m	4.0	T	10			.1		*10*	*m*	5/
2N3858	MPS6512		SNA	0.2	A	30	0	0.1	60	2.0	m	90	T	4.0							
2N3858A	MPS6566		SNA	0.2	A	60	0	0.1	45	1.0	m	90	T	4.0							98/
2N3859	MPS6513		SNA	0.2	A	30	0	0.1	100	2.0	m	90	T	4.0							
2N3859A	MPS6566		SNA	0.2	A	60	0	0.1	75	1.0	m	90	T	4.0							98/
2N3860	MPS6514		SNA	0.2	A	30	0	0.1	150	2.0	m	90	T	4.0							
2N3861			SNA	2.0	A	530	V	.025	30	25	m	50	T	55			*1.5*		*25*	*m*	
2N3862			SNA	0.36	A	20	0	0.2	50	10	m	600	T				*.25*		*10*	*m*	18/
2N3863	2N3716		SNS	117	C	50	0	7.5	30	3.0	A	0.5	T			*8.0/16*	*1.0*		*3.0*	*A*	3/
2N3864	2N5758		SNS	117	C	90	0	7.5	30	3.0	A	0.5	T			*8.0/16*	*1.0*		*3.0*	*A*	3/
2N3865			SNS	117	C	150	0	7.5	30	3.0	A	0.5	T			*8.0/16*	*1.0*		*3.0*	*A*	3/
★ 2N3866		1	SNP	5.0	C	30	0	0.4	10	.05	A	500	T	3.0		1.0/	**10**		**400**	**M**	39/79
★ 2N3866A		1	SNP	5.0	C	30	0	0.4	25	50	m	800	T	3.0		1.0/	**10**		**400**	**M**	39/79
2N3867			SPG	1.0	A	40	0	3.0	40	1.5	A	60	T	120	*85/250*		*.75*		*1.5*	*A*	5/
2N3868		1	SPG	1.0	A	60	0	3.0	30	1.5	A	60	T	120	*85/250*		*.75*		*1.5*	*A*	5/
2N3869			SNA	2.5	C	20	0	0.5	20	30	m	400	T	10			*.7*		*.45*	*A*	5/
2N3870	THRU		THY	Table 6																	
2N3873			THY	Table 6																	
2N3876			SNA	150	C	50	0	10	25	10	A	50	T	1000			*1.0*		*10*	*A*	81/
2N3877	2N4410		SNA	0.2	A	70	0	0.05	20	2.0	m										
2N3877A	2N4410		SNA	0.2	A	85	0	0.05	20	2.0	m										
2N3878	2N5428		SNA	35	C	50	0	4.0	40	0.5	A	40	T	175			*2.0*		*4.0*	*A*	66/
2N3879	2N5427		SNG	35	C	75	0	7.0	12	4.0	A	40	T	175	*500/1250*		*1.2*		*4.0*	*A*	66/
2N3880			SNF	0.2	A	15	0		30	3.0	m	1200	T	0.75			**14**	**3.5**	**450**	**M**	72/
★ 2N3882			FET	Table 9																	
★ 2N3883		1	GPG	0.3	A	15	0	0.3	30	0.2	A	100	T	8.0	*55/110*		*.5*		*.2*	*A*	5/31
2N3884	THRU		THY	Table 6																	
2N3899			THY	Table 6																	
2N3900	2N5088		SNA	0.2	A	18	0	0.1	250	2.0	m			12							
2N3900A	2N5088		SNE	0.2	A	18	0	0.1	250	2.0	m			12				**5.0**	**AUD**		
2N3901	2N5088		SNE	0.2	A	18	0	0.1	350	2.0	m							**5.0**	**AUD**		
★ 2N3902		1	SNA	100	C	400	0	2.5	20	1.0	A	0.8	E				*2.5*		*2.5*	*A*	3/11
★ 2N3903			SNE	0.31	A	40	0	0.2	50	10	m	250	T	4.0	*70/225*			**6.0**	**AUD**		92/29
★ 2N3904		1	SNE	0.31	A	40	0	0.2	100	10	m	300	T	4.0	*70/250*			**5.0**	**AUD**		92/29
★ 2N3905		1	SPE	0.31	A	40	0	0.2	50	10	m	200	T	4.5	*70/250*			**5.0**	**AUD**		92/29
★ 2N3906		1	SPE	0.31	A	40	0	0.2	100	10	m	250	T	4.5	*70/260*			**4.0**	**AUD**		92/29
2N3907			**SNA**	0.3	A	45	0	0.03	60	10	u	60	T	6.0				**4.0**	**1000**	**H**	
2N3908	2N2919		**SNM**	0.3	A	60	0	0.03	100	10	u	60	T	6.0			*.35*		*1.0*	*m*	
2N3909,A			FET	Table 9																	
2N3910			SPC	0.5	A	50	0	0.2	40	1.0	m	4.0	T	8.0	*250/550*		*.3*		*10*	*m*	46/
2N3912			SPC	0.5	A	30	0	0.2	90	1.0	m	10	T	8.0	*200/500*		*.3*		*10*	*m*	46/
2N3913			SPC	0.4	A	50	0	0.2	40	1.0	m	4.0	T	8.0	*250/450*		*.3*		*10*	*m*	18/
2N3914			SPC	0.4	A	40	0	0.2	60	1.0	m	8.0	T	8.0	*200/500*		*.3*		*10*	*m*	18/
2N3915			SPC	0.4	A	30	0	0.2	90	1.0	m	10	T	8.0	*200/500*		*.3*		*10*	*m*	18/
2N3916			SNA	5.0	C	150	0	0.15	40	.15	A	50	T	30			*5.0*		*.15*	*A*	
2N3917			SNA	20	C	40	0	2.0	30	1.0	A	50	T	80			*1.2*		*1.0*	*A*	3/
2N3918			SNA	20	C	40	0	2.0	100	1.0	A	50	T	80			*1.2*		*1.0*	*A*	3/
2N3919			SNA	15	C	60	0	10	40	2.0	A	80	T	80			*1.2*		*10*	*A*	3/
2N3920			SNA	15	C	60	0	10	100	2.0	A	80	T	80			*1.2*		*10*	*A*	3/
2N3921			FET	Table 9																	
2N3922			FET	Table 9																	
2N3923			SNA	0.8	A	150	0	0.1	30	25	m	40	T	3.5			*1.0*		*25*	*m*	5/
★ 2N3924		1	SNP	7.0	C	18	0	0.5				250	T	20		**4.0/**	**6.0**		**175**	**M**	39/79
★ 2N3925		1	SNP	10	C	18	0	1.0				250	T	20		**5.0/**	**5.8**		**175**	**M**	102/24
★ 2N3926		1	SNP	11.6	C	19	0	1.5				250	T	20		**7.0/**	**5.4**		**175**	**M**	60/36
★ 2N3927			SNP	23.2	C	18	0	3.0				200	T	45		**12/**	**4.8**		**175**	**M**	60/36
2N3928	2N5337		SNA	7.5	C	40	0	3.0	20	1.5	A	200	T	25			*5.0*		*1.5*	*A*	
2N3929	2N5477		SNA	30	C	40	0	3.0	20	1.5	A	200	T	25			*5.0*		*1.5*	*A*	59/
2N3930			SPE	0.4	A	180	0	0.1	80	10	m	40	T	5.0				**3.0**	**10**	**K**	18/
2N3931			SPE	0.7	A	180	0	0.1	80	10	m	40	T	5.0				**3.0**	**10**	**K**	5/
2N3932			SNF	0.2	A	20	0		40	2.0	m	750	T	0.55			**11**	**4.5**	**200**	**M**	

	TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF dB Max @ f		Unit	PACKAGE To-Case No. No.
																t_{on} ns Max	t_{off} ns Max		$V_{CE\ (sat)}$ Volts @ Max	I_C/I_B	& I_C	
	2N3933			SNF	0.2	A	30	0		60	2.0	m	750	T				14	4.0	200	M	
	2N3934			FET	Table 9																	
	2N3935			FET	Table 9																	
D	2N3936	THRU		THY	Table 6																	
D	2N3940			THY	Table 6																	
D	2N3941			SNA	0.75	C	45	0	0.05	400	10	u	200	T	6.0							78/
D	2N3942			SNA	0.75	C	45	0	0.05	400	10	u	200	T	6.0							78/
D	2N3943			SNA	0.5	C	45	0	0.05	400	10	u	200	T	6.0							71/
D	2N3944			SNA	0.5	C	45	0	0.05	400	10	u	200	T	6.0							71/
	2N3945	2N5334		SNA	5.0	C	50	0	1.0	40	.15	A	60	T	12			.5		.15	A	5/
★	2N3946		1	SNE	0.36	A	40	0	0.2	50	10	m	250	T	4.0	*335/375*			5.0	10	H	18/22
★	2N3947		1	SNE	0.36	A	40	0	0.2	100	10	m	300	T	4.0	*335/450*			5.0	10	H	18/22
★	2N3948		1	SNP	1.0	A	20	0	0.4	15	50	m	700	T	4.5	**1.0/**		6.0		400	M	39/79
★	2N3950		1	SNP	70	C	35	0	3.3				150		120	**50/**		8.0		50	M	60/36
	2N3953			SNF	0.2	A	12	0	0.03	30	2.0	m	1300	T	1.8			15	3.0	450	M	72/
	2N3954	THRU		FET	Table 9																	
★	2N3958			FET	Table 9																	
★	2N3959		1	SNI	0.4	A	12	0		40	10	m	1300	T	2.5	*2.4/1.6*		*.3*	*10*	*30*	*m*	18/22
★	2N3960		1	SNI	0.4	A	12	0		40	10	m	1600	T	2.5	*2.4/1.6*		*.3*	*10*	*30*	*m*	18/22
★	2N3961		1	SNP	10	C	40	0	1.0				400	T	10	**7.5/**		8.8		100	M	102/24
	2N3962			SPA	0.36	A	60	0	0.2	100	10	u	40	T	6.0			*.25*		*10*	*m*	18/
	2N3963			SPA	0.36	A	80	0	0.2	100	10	u	40	T	6.0			*.25*		*10*	*m*	18/
	2N3964			SPA	0.36	A	45	0	0.2	250	10	u	50	T	6.0			*.25*		*10*	*m*	18/
	2N3965			SPA	0.36	A	60	0	0.2	250	10	u	50	T	6.0			*.25*		*10*	*m*	18/
	2N3966			FET	Table 9																	
	2N3972			FET	Table 9																	
	2N3973	2N4400		SNG	0.36	A	30	0	0.4	35	10	m	200	T	7.0	*60/110*		*.3*		*.15*	*A*	
	2N3974	2N4401		SNG	0.36	A	30	0	0.4	55	10	m	200	T	7.0	*60/110*		*.3*		*.15*	*A*	
	2N3975	2N4400		SNG	0.36	A	30	0	0.4	35	10	m	200	T	7.0	*60/200*		*.3*		*.15*	*A*	
	2N3977	2N2944		SPC	0.4	A	10	0	0.1	40	5.0	m	1.0	T	14			*.1*		*5.0*	*m*	46/
★	2N3978		1	SPC	0.4	A	20	0	0.1	30	5.0	m	1.0	T	14			*.15*		*5.0*	*m*	46/
D	2N3980			UJT	Table 8																	
D	2N3981	2N2219		SNS	0.8	A	30	0	1.0	30	.15	A	250	T	8.0	*30/35*		*.5*		*.15*	*A*	5/
D	2N3982	2N2218		SNS	0.8	A	20	0	1.0	40	.15	A	250	T	8.0	*20/35*		*.5*		*.15*	*A*	5/
	2N3983			SNA	0.2	A	12	0	0.03	30	4.0	m	500	T						100	M	92/
	2N3984			SNA	0.2	A	12	0	0.03	20	4.0	m	400	T						100	M	92/
	2N3985			SNA	0.2	A	12	0	0.03	20	4.0	m	300	T						100	M	92/
	2N3986	THRU		THY	Table 6																	
	2N3992			THY	Table 6																	
	2N3993			FET	Table 9																	
	2N3994			FET	Table 9																	
	2N3995	2N2929		GPA	0.3	A	12	0		40	2.0	m	600	T								
	2N3996	2N5346		SNG	2.0	A	80	0	5.0	40	1.0	A	40	T	150	*300/1500*		*.25*		*1.0*	*A*	
	2N3997	2N5346		SNG	2.0	A	80	0	5.0	80	1.0	A	40	T	150	*300/2000*		*.25*		*1.0*	*A*	
	2N3998	2N5477		SNG	2.0	A	80	0	5.0	40	1.0	A	40	T	150	*300/1500*		*.25*		*1.0*	*A*	
	2N3999	2N5478		SNG	2.0	A	80	0	5.0	80	1.0	A	40	T	150	*300/2000*		*.25*		*1.0*	*A*	
	2N4000	2N5336		SNA	1.0	A	80	0	1.0	30	0.5	A	40	T	60			*.3*		*.5*	*A*	5/
	2N4001	2N5339		SNA	1.0	A	100	0	1.0	40	0.5	A	40	T	60			*.3*		*.5*	*A*	5/
	2N4002	MJ7000		SNG	4.0	A	80	0	30	20	15	A	30	T		*1000/3000*		*1.2*	*7.5*	*30*	*A*	63/
	2N4003	MJ7000		SNG	4.0	A	100	0	30	20	15	A	30	T		*1000/3000*		*1.2*	*7.5*	*30*	*A*	63/
	2N4004			SNG	1.2	A	80	0	20	30	10	A	30	T		*1000/4000*		*1.6*	*5.0*	*20*	*A*	
	2N4005			SNG	1.2	A	100	0	20	30	10	A	30	T		*1000/4000*		*1.6*	*5.0*	*20*	*A*	
	2N4006			SPG	0.4	A	6	0	0.1				20	T		*180/440*						46/
	2N4007			SPG	0.4	A	15	0	0.1				15	T		*180/440*						46/
	2N4008			SPG	0.4	A	30	0	0.1				15	T		*180/440*						46/
★	2N4012		1	SNA	11.6	C	40	0	1.5	4.0	1.0	A	350		10	*2.5/25*		**4.0**	**28**	**1002**	**M**	60/36
★	2N4013		1	SNS	0.36	A	40	0	1.0		100	m	300	T	12	*20/50*						18/22
★	2N4014		1	SNS	0.36	A	50	0	1.0		100	m	300	T	10	*20/50*						18/22
★	2N4015		1	SPM	0.4	A	60	0	0.3	135	1.0	m	200	T	8.0					1000	H	/654
★	2N4016		1	SPM	0.4	A	60	0	0.3	135	1.0	m	200	T	8.0					1000	H	/654
	2N4017			SPE	0.4	A	80	0	0.2	100	10	u	40	T	6.0				10	100	H	
	2N4018			SPE	0.4	A	60	0	0.2	100	10	u	7.0	E	6.0				10	100	H	
	2N4019			SPE	0.4	A	45	0	0.2	250	10	u	50	T	6.0				4.0	100	H	
	2N4020			SPA	0.4	A	45	0	0.2	250	10	u	50	T	6.0				2.0	1	K	
	2N4021			SPA	0.4	A	60	0	0.2	100	10	u	40	T	6.0				2.0	1	K	
	2N4022			SPA	0.4	A	60	0	0.2	250	10	u	50	T	6.0				2.0	1	K	
	2N4023			SPA	0.4	A	45	0	0.2	250	10	u	50	T	6.0				2.0	1	K	
	2N4024			SPA	0.4	A	60	0	0.2	100	10	u	40	T	6.0				2.0	1	K	
	2N4025			SPA	0.4	A	60	0	0.2	250	10	u	50	T	6.0				2.0	1	K	
	2N4026			SPG	0.5	A	60	0	1.0	40	0.1	A	100	T		*100/400*		*1.0*		*1.0*	*A*	18/

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C @ I_B	& I_C	Unit	PACKAGE To-Case No. No.
2N4027			SPG	0.5 A		80	0	1.0	40	0.1 A	100	T		*100/400*		.5		.5 A		18/
2N4028			SPG	0.5 A		60	0	1.0	100	0.1 A	150	T		*100/400*		*1.0*		*1.0 A*		18/
2N4029			SPG	0.5 A		80	0	1.0	100	0.1 A	150	T		*100/400*		.5		.5 A		18/
2N4030			SPG	0.8 A		60	0	1.0	40	0.1 A	100	T		*100/400*		*1.0*		*1.0 A*		5/
2N4031			SPG	0.8 A		80	0	1.0	40	0.1 A	100	T		*100/400*		.5		.5 A		5/
2N4032			SPG	0.8 A		60	0	1.0	100	0.1 A	150	T		*100/400*		*1.0*		*1.0 A*		5/
2N4033			SPG	0.8 A		80	0	1.0	100	0.1 A	150	T		*100/400*		.5		.5 A		5/
2N4034			SPF	0.36 A		40	0	0.1	70	10 m	400	T		*40/150*			6.0	100 M		18/
2N4035			SPF	0.36 A		40	0	0.1	150	10 m	450	T		*40/150*			6.0	1 M		18/
2N4036	MM4036		SPG	7.0 A		65	0	1.0	40	.15 A	60	T		*110/700*						5/
2N4037	MM4037		SPA	1.0 A		40	0	1.0	50	.15 A	60	T								5/
2N4038			FET	Table 9																
2N4039			FET	Table 9																
2N4040			SNA	17.5 C		40	0	1.0	10	0.1 A	400	T				*2.0*		*1.0 A*		
2N4041			SNA	10 C		40	0	0.5	10	75 m	400	T	8.0			*2.0*		*.5 A*		
D 2N4042			**SNA**	0.3 C		60	0	0.01	200	10 u	200	T	0.8				2.0	1000 H		70/
D 2N4043			**SNA**	0.3 C		45	0	0.01	80	10 u	150	T	0.8				3.0	1000 H		70/
2N4044			**SNA**	0.4 C		60	0	0.01	200	10 u	200	T	0.8				2.0	1000 H		78/
2N4045			**SNA**	0.4 C		45	0	0.01	80	10 u	150	T	0.8				3.0	1000 H		78/
2N4046	2N3052		SNG	0.8 A		30	0	0.5		100 m	250	T	12	*35/60*						5/
2N4047	2N2193		SNG	0.8 A		50	0	0.5		100 m	250	T	10	*35/60*						5/
★ 2N4048		1	GPG	170 C		30	0	60	60	15 A	0.12	E		*20K/70K*	*.30*			*60 A*		36/7
★ 2N4049		1	GPG	170 C		45	0	60	60	15 A	0.12	E		*20K/70K*	*.30*			*60 A*		36/7
★ 2N4050		1	GPG	170 C		60	0	60	60	15 A	0.12	E		*20K/70K*	*.30*			*60 A*		36/7
★ 2N4051		1	GPG	170 C		30	0	60	80	15 A	0.16	E		*20K/70K*	*.30*			*60 A*		36/7
★ 2N4052		1	GPG	170 C		45	0	60	80	15 A	0.16	E		*20K/70K*	*.30*			*60 A*		36/7
★ 2N4053			GPG	170 C		60	0	60	80	15 A	0.16	E		*20K/70K*	*.30*			*60 A*		36/7
D 2N4054	MJ400		SNA	6.25 C		300	0	0.1	30	50 m	15	T								
D 2N4055	MJ400		SNA	6.25 C		250	0	0.1	30	50 m	15	T				*5.0*		*75 m*		
D 2N4056	MJ400		SNA	6.25 C		200	0	0.1	30	50 m	15	T				*5.0*		*75 m*		
D 2N4057	MJ400		SNA	6.25 C		150	0	0.1	30	50 m	15	T				*5.0*		*75 m*		
2N4058	MPS6522		SPE	0.25 A		30	0	0.03	100	0.1 m							5.0	AUD		92/
2N4059	MPS6516		SPA	0.25 A		30	0	0.03	45	1.0 m						*.7*		*10 m*		92/
2N4060	MPS6516		SPA	0.25 A		30	0	0.03	45	1.0 m						*.7*		*10 m*		92/
2N4061	MPS6517		SPA	0.25 A		30	0	0.03	90	1.0 m						*.7*		*10 m*		92/
2N4062	MPS6518		SPA	0.25 A		30	0	0.03	180	1.0 m						*.7*		*10 m*		92/
2N4063	2N3439		SNA	10 C		350	0	1.0	40	.02 A	15	T	10							
2N4064	2N3440		SNA	10 C		250	0	1.0	40	.02 A	15	T	10							
2N4065	THRU		FET	Table 9																
2N4067			FET	Table 9																
2N4069			SNA	1.0 C		150	0	0.2	30	.03 A	50	T								
2N4070	2N3448		SNG	65 C		100	0	10	40	5.0 A	20	T	200	*500/1600*		*1.5*		*5.0 A*		3/
2N4071			SNG	65 C		150	0	10	40	5.0 A	200	T	200	*500/1600*						3/
★ 2N4072		1	SNP	0.35 A		20	0	0.1	10	25 m	300	T	4.0	**0.25/**		10		175 M		18/22
★ 2N4073		1	SNP	1.5 C		20	0	0.15	10	25 m	300	T	4.0	**0.5/**		10		175 M		5/31
2N4074			SNA	0.4 A		40	0	0.3	75	10 m										
2N4075	2N5347		SNG	30 C		80	0	3.0	30	1.0 A	30	T	70	*300/1500*						
2N4076	2N5348		SNG	30 C		80	0	3.0	50	1.0 A	30	T	70	*300/1500*						
2N4077			GNA	7.5 C		20	0	1.0	75	0.5 A	1.0	T								
2N4078			GPA	7.5 C		20	0	1.0	75	0.5 A	1.0	T								
2N4080			SPF	0.3 A		15	0	0.05	20	3.0 m	1000	T				15	6.0	200 M		72/
D 2N4081			SNF	0.2 A		40	0		40	2.0 m	600	T				19	3.5	200 M		104/
2N4082	THRU		FET	Table 9																
2N4085			FET	Table 9																
2N4086	MPS6514		SNA	0.2 A		12	0	0.1	150	2.0 m			12							
D 2N4087	MPS6515		SNA	0.2 A		12	0	0.1	250	2.0 m			12							98/
D 2N4087A	MPS6515		SNE	0.2 A		12	0	0.1	250	2.0 m			12				5.0	AUD		98/
D 2N4088			FET	Table 9																
2N4095			FET	Table 9																
D 2N4096	THRU		THY	Table 6																
D 2N4098			THY	Table 6																
D 2N4099			**SNA**	0.3 A		55	0	0.01	175	1.0 m	150	T	0.8				3.0	200 H		70/
2N4100			**SNA**	0.4 A		55	0	0.01	175	1.0 m	150	T	0.8				3.0	200 H		78/
2N4101	THRU		THY	Table 6																
2N4103			THY	Table 6																
2N4104			SNE	0.3 A		60	0	0.05	400	1.0 u	90	T	4.5	*70/300*			4.0	100 H		18/22
2N4106	MP2060		GPA	1.6 A				1.0	70	5.0 m										
2N4108	THRU		THY	Table 6																
2N4110			THY	Table 6																
2N4111	2N3715		SNA	30 C		60	0	5.0	40	2.0 A	70	T	120							3/

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C @ I_B & I_C	Unit	PACKAGE To-Case No. No.
2N4112			SNA	30	C	60	O	5.0	100	2.0 A	80	T	120						3/
2N4113	2N3716		SNA	30	C	80	O	5.0	40	2.0 A	70	T	120						3/
2N4114			SNA	3.0	A	80	O	5.0	100	2.0 A	8000	E	120						3/
2N4115	2N5428		SNA	37	C	80	O	5.0	40	2.0 A	2800	E	120						
2N4116			SNA	37	C	80	O	5.0	100	2.0 A	8000	E	120						
2N4117,A	THRU		FET	Table 9															
2N4120,A			FET	Table 9															
2N4121	2N3905		SPF	0.2	A	40	O	0.1	70	10 m	400	T		*40/150*			6.0	100 M	
★ 2N4123		1	SNE	0.31	A	30	O	0.2	50	2.0 m	250	T	4.0				6.0	AUD	92/29
★ 2N4124		1	SNE	0.31	A	25	O	0.2	120	2.0 m	300	T	4.0				5.0	AUD	92/29
★ 2N4125		1	SPE	0.31	A	30	O	0.2	50	2.0 m	200	T	4.5				5.0	AUD	92/29
★ 2N4126		1	SPE	0.31	A	25	O	0.2	120	2.0 m	250	T	4.5				4.0	AUD	92/29
2N4127			SNA	25	C	40	O	2.0	10	0.2 A	300	T	25						
2N4128			SNA	40	C	40	O	4.0	10	0.2 A	200	T	45						
★ 2N4130	2N5869	1	SNP	120	C	65	O	10	10	2.0 A	125	T	200	50/		8.0		70 M	3/1
2N4131			SNA	60	C	80	O	5.0	10	1.0 A	1500	E	110						37/
2N4132			SNA	7.5	C	80	O	0.6	10	0.2 A	200	T	15			.5		.6 A	37/
2N4133			SNA	3.0	C	80	O	0.6	10	0.2 A	200	T	15			.5		.6 A	5/
2N4134			SNF	0.2	A	30	O	0.03	25	4.0 m	350	T	1.2			20	2.5	60 M	72/
2N4135			SNF	0.2	A	30	O	0.03	25	4.0 m	425	T	1.2			20	2.5	60 M	72/
2N4137			SNS	0.36	A	40	O	0.2	40	10 m	500	T		*12/12*					18/
2N4139			FET	Table 9															
2N4140	2N4400		SNG	0.3	A	30	O	0.2		150 m	250	T	8.0	*50/310*					
2N4141	2N4401		SNG	0.3	A	30	O	0.2		150 m	250	T	8.0	*50/310*					
2N4142	2N4402		SPG	0.3	A	40	O	0.2		150 m	200	T	8.0	*50/110*					
2N4143	2N4403		SPG	0.3	A	40	O	0.2		150 m	200	T	8.0	*50/110*					
2N4144	THRU		THY	Table 6															
2N4149			THY	Table 6															
2N4150	2N5337		SNA	5.0	C	80	O	5.0	40	5.0 A	15	T							5/
2N4151	THRU		THY	Table 6															
2N4205			THY	Table 6															
2N4207			SPS	0.3	A	6	O	0.05	50	10 m	650	T	3.0	*15/15*					18/
2N4208			SPS	0.3	A	12	O	0.05	30	10 m	700	T	3.0	*15/20*					18/
2N4209			SPS	0.3	A	15	O	0.05	50	10 m	850	T	3.0	*15/20*					18/
2N4210	MJ7000		SNA	100	C	60	O	20	20	10 A	10	T	850						63/
2N4211	MJ7000		SNA	100	C	80	O	20	20	10 A	10	T	850						63/
2N4212	THRU		THY	Table 6															
2N4219			THY	Table 6															
2N4220,A	THRU		FET	Table 9															
2N4224,A			FET	Table 9															
2N4226	2N5334		SNS	5.0	C	60	O	3.0	40	1.0 A	150	T	25	*35/75*					
2N4227	2N4400		SNG	0.3	A	30	O	0.2		150 m	250	T	8.0	*50/310*					
★ 2N4228	2N4402		SPG	0.3	A	40	O	0.2		150 m	200	T	8.0	*50/110*		.7		1.5 A	
★ 2N4231			SNA	35	C	40	O	3.0	25	1.5 A	1.0	T	200			.7		1.5 A	66/80
★ 2N4231A		1	SNA	75	C	40	O	5.0	25	1.5 A	4.0	T	300			.7		1.5 A	66/80
★ 2N4232		1	SNA	35	C	60	O	3.0	25	1.5 A	1.0	T	200			.7		1.5 A	66/80
★ 2N4232A		1	SNA	75	C	60	O	5.0	25	1.5 A	4.0	T	300			.7		1.5 A	66/80
★ 2N4233		1	SNA	35	C	80	O	3.0	25	1.5 A	1.0	T	200			.7		1.5 A	66/80
★ 2N4233A		1	SNA	75	C	80	O	5.0	25	1.5 A	4.0	T	300			.7		1.5 A	66/80
★ 2N4234		1	SPA	1.0	A	40	O	1.0	30	250 m	3.0	T	100			.6		1.0 A	5/31
★ 2N4235		1	SPA	1.0	A	60	O	1.0	30	250 m	3.0	T	100			.6		1.0 A	5/31
★ 2N4236		1	SPA	1.0	A	80	O	1.0	30	250 m	3.0	T	100			.6		1.0 A	5/31
★ 2N4237			SNA	5.0	C	40	O	1.0	40	500 m	10	T	100			2.5		1.0 A	5/31
★ 2N4238		1	SNA	5.0	C	60	O	1.0	40	500 m	2.0	T	100			2.5		1.0 A	5/31
★ 2N4239		1	SNA	5.0	C	60	O	1.0	40	500 m	2.0	T	100			2.5		1.0 A	5/31
2N4240	2N3739	1	SNG	35	C	300	O	2.0	30	.75 A	2.0	T	120	*500/9000*					66/80
2N4241			GPA	37.5	C	20	O	5.0	60	300 m						.35		5.0 A	3/
2N4242			GPA	10	A	70	S	10	40	5.0 A	0.5	T							3/
2N4243			GPA	10	A	55	S	10	40	5.0 A	0.5	T							3/
2N4244			GPA	10	A	40	S	10	40	5.0 A	0.5	T							3/
2N4245			GPA	10	A	70	S	10	60	5.0 A	0.5	T							3/
2N4246			GPA	10	A	55	S	10	60	5.0 A	0.5	T							3/
2N4247			GPA	10	A	40	S	10	60	5.0 A	0.5	T							3/
2N4248	2N5086		SPA	0.2	A	40	O	0.1			40	T	6.0						
2N4249	2N5086		SPE	0.2	A	60	O	0.1			40	T	6.0				3.0	AUD	
2N4250	2N5087		SPE	0.2	A	40	O	0.1			40	T	6.0				2.0	AUD	
2N4251			SNG	0.25	A	10	O	0.1	100	10 m	1300	T	2.0	*20/60*					46/
2N4252			SNA	0.2	A	18	O	0.05	50	2.0 m	600	T							72/
2N4253			SNA	0.2	A	18	O	0.05	30	2.0 m	600	T							72/
2N4254	MPS6547		SNA	0.2	A	18	O	0.05	50	2.0 m	600	T							92/

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF dB Max @ I_C/I_B	@ f & I_C	Unit	PACKAGE To-Case No.
2N4255	MPS6547		SNA	0.2	A	18	O	0.05	30	2.0 m	600	T								92/
2N4256	2N3904		SNG	0.2	A	30	S	0.1	100	2.0 m				*180/3500*						98/
2N4257			SPS	0.2	A	6	O	0.05	30	10 m	500	T		*15/15*						
2N4257A			SPS	0.5	C	6	O	0.05	30	10 m	500	T		*15/15*						
2N4258			SPS	0.2	A	12	O	0.05	30	10 m	700	T		*15/20*						
2N4258A			SPS	0.5	C	12	O	0.05	30	10 m	500	T		*15/18*						
2N4259			SNF	.175	A	30	O		60	20 m	750	T				11	5.0	450 M		
★ 2N4260		1	SPS	0.2	A	15	O	0.03	30	10 m	1500	T	2.5	*1.2/1.2*		*15*		*10 m*		72/20
★ 2N4261		1	SPS	0.2	A	15	O	0.03	30	15 A	2000	T	2.5	*1.2/1.2*		*15*		*10 m*		72/20
D 2N4262			SNA	1.5	C	10	O	0.2	75	0.3 A	600	T								102/
D 2N4263			SNA	1.5	C	10	O	0.2	75	0.3 A	800	T								102/
★ 2N4264		1	SNS	0.31	A	15	O	0.2	40	10 m	300	T	4.0	*25/35*						92/29
★ 2N4265		1	SPS	0.31	A	12	O	0.2	100	15 A	300	T	4.0	*25/35*		*.22*		*10 m*		92/29
2N4267			FET	Table 9																
2N4268			FET	Table 9																
2N4269			SNA	0.36	A	140	O	0.03		10 m			5.0							18/
2N4270			SNA	0.58	A	140	O	0.03		10 m			5.0							5/
2N4271	2N5682		SNA	5.0	C	140	O	1.0	20	0.2 A	20	T	25							5/
2N4272	2N5682		SNA	5.0	C	140	O	2.5	20	1.0 A	10	T	75							5/
2N4273			SNA	25	C	140	O	2.5	20	1.0 A	10	T	75							66/
2N4274			SNS	0.28	A	12	O	0.1	18	100 m	400	T		*12/12*						
2N4275			SNS	0.28	A	15	O	0.1	18	100 m	400	T		*12/12*						
★ 2N4276		1	GPG	170	C	20	O	60	60	15 A	0.12	E		*20K/70K*		*.15*		*15 A*		3/
★ 2N4277			GPG	170	C	20	O	60	80	15 A	0.16	E		*20K/70K*		*.15*		*15 A*		3/
★ 2N4278		1	GPG	170	C	30	O	60	60	15 A	0.12	E		*20K/70K*		*.15*		*15 A*		3/
★ 2N4279		1	GPG	170	C	30	O	60	80	15 A	0.16	E		*20K/70K*		*.15*		*15 A*		3/
★ 2N4280		1	GPG	170	C	45	O	60	60	15 A	0.12	E		*20K/70K*		*.15*		*15 A*		3/
★ 2N4281		1	GPG	170	C	45	O	60	80	15 A	0.16	E		*20K/70K*		*.15*		*15 A*		3/
★ 2N4282		1	GPG	170	C	60	O	60	60	15 A	0.12	E		*20K/70K*		*.15*		*15 A*		3/
★ 2N4283		1	GPG	170	C	60	O	60	80	15 A	0.16	E		*20K/70K*		*.15*		*15 A*		3/
D 2N4284			SPA	0.25	A	25	O	0.05	35	1.0 m	7.0		10							
2N4285			SPA	0.25	A	35	O	0.05	35	1.0 m	7.0		10							
2N4286	MPS6515		SNA	0.25	A	25	O	0.1	150	1.0 m	40	T	6.0							
2N4287	MPS6566		SNE	0.25	A	45	O	0.1	150	1.0 m	40	T	6.0				5.0	AUD		
2N4288	MPS6518		SPA	0.25	A	25	O	0.1	150	1.0 m	40	T	8.0							
2N4289	2N5086		SPE	0.25	A	45	O	0.1	150	1.0 m	40	T	8.0				4.0	AUD		
2N4290	MPS6533		SPA	0.25	A	20	O	0.6	50	100 m	100	T	10							
2N4291	MPS6534		SPA	0.25	A	30	O	0.6	100	100 m	100	T	10							
2N4292	MPS918		SNF	0.2	A	15	O	0.05	20	3.0 m	600	T	2.2			12	6.0	200 M		
2N4293	MPS918		SNF	0.2	A	15	O	0.05	20	3.0 m	600	T	2.2			14	6.0	200 M		
2N4294	2N4264		SNS	0.2	A	12	O	0.2	30	10 m	400	T	5.0	*15/20*						
2N4295	2N4264		SNS	0.2	A	15	O	0.2	40	10 m	500	T	4.0	*12/15*						
2N4296	2N3738		SNG	20	C	250	O	1.0	50	.05 A	20	T		*7K/10K*						66/
2N4297	2N3738		SNG	20	C	250	O	1.0	75	.05 A	20	T		*7K/10K*						66/
2N4298	2N3739		SNG	20	C	350	O	1.0	25	.05 A	20	T		*7K/10K*						66/
2N4299	2N3739		SNG	20	C	350	O	1.0	50	.05 A	20	T		*7K/10K*						66/
2N4300	2N5336		SNA	15	C	80	O	2.0	30	1.0 A	30	T								5/
2N4302	THRU		FET	Table 9																
2N4304			FET	Table 9																
2N4305	2N5337		SNG	1.5	A	80	O	5.0	50	1.0 A	100	T	100	*140/400*						
2N4306			SNG	4.0	A	80	O	5.0	50	1.0 A	100	T	100	*140/400*						5/
2N4307	2N5337		SNG	1.5	A	60	O	5.0	50	1.0 A	100	T	100	*140/400*						
2N4308			SNG	4.0	A	60	O	5.0	50	1.0 A	100	T	100	*140/400*						5/
2N4309	2N5337		SNG	1.5	A	80	O	5.0	50	1.0 A	100	T	100	*140/400*						
2N4310			SNG	4.0	A	80	O	5.0	40	1.0 A	100	T	100	*140/400*						5/
2N4311	2N5337		SNG	1.5	A	60	O	5.0	40	1.0 A	100	T	100	*140/400*						
2N4312			SNG	4.0	A	60	O	5.0	40	1.0 A	100	T	100	*140/400*						5/
2N4313			SPC	0.2	A	12	O	0.1	30	30 m	700	T		*20/25*						
2N4314		1	SPA	1.0	A	65	O	1.0	50	.15 A	60	T								5/
2N4320	THRU		THY	Table 6																
2N4337			THY	Table 6																
2N4338	THRU		FET	Table 9																
2N4343			FET	Table 9																
★ 2N4347			SNA	100	C	120	O	5.0	15	2.0 A	0.2	T								3/
★ 2N4348			SNA	120	C	120	O	10	15	5.0 A	0.2	T								/11
2N4350			SNA	7.0	C	40	O	.350	10	.35 A	300	T	10							5/31
2N4352			FET	Table 9																
2N4355			SPG	0.35	A	60	O	0.5	60	0.1 m	100	T	30	*100/400*						
2N4356			SPE	0.35	A	80	O	0.5	25	0.1 m	100	T	30	*100/400*			3.0	1.0 K		
2N4357			SPE	0.4	A	240	O	0.1	80	10 m	40	T	7.0				3.0	1000 H		18/

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	@ I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF dB Max @ f	Unit	PACKAGE To-Case No.
															t_{on} ns Max	t_{off} ns Max	$V_{CE(sat)}$ Volts Max	@ $\frac{I_C}{I_B}$ & I_C		
2N4358			SPE	0.7	A	240	O	0.1	80	10 m		40	T	7.0				3.0	1000	H	39/
2N4359			SPE	0.36	A	45	O	0.05	50	1.0 m		20	T	6.0				4.0	1.0	K	18/
★ 2N4360			FET	Table 9																
2N4361	THRU		THY	Table 6																
2N4380			THY	Table 6																
2N4381			FET	Table 9																
2N4382			FET	Table 9																
2N4383			SNE	0.8	A	30	O	0.8	100	10 u		300	T	8.0				2.0	AUD		5/
2N4384			SNE	0.5	A	30	O	0.8	100	10 u		300	T	8.0				2.0	AUD		18/
2N4385			SNE	0.8	A	30	O	0.8	40	10 u		300	T	8.0				3.0	AUD		5/
2N4386			SNE	0.5	A	30	O	0.8	40	10 u		300	T	8.0				3.0	AUD		18/
2N4387	2N3740		SPA	20	A	40	O	2.0	25	500 m		25	T	275							66/
2N4388	2N3740		SPA	20	A	60	O	2.0	25	500 m		25	T	275							66/
2N4389			SPG	0.2	A	12	O	0.1	30	10 m		400	T	6.0	20/90		.15		10 m		
2N4390			SNG	0.5	A	120	O	0.1	20	2.0 m		50	T		650/1300						104/
2N4391	THRU		FET	Table 9																
2N4393			FET	Table 9																
2N4395	2N3716		SNG	62.5	C	40	O	5.0	50	2.0 A		4.0	T		800/1500						3/
2N4396	2N3716		SNG	62.5	C	60	O	5.0	40	2.0 A		4.0	T		1000/2000						3/
★ 2N4398		1	SPG	200	C	40	O	30	15	15 A		4.0	T		400/2100		1.0		15 A		/12
★ 2N4399		1	SPG	200	C	60	O	30	15	15 A		4.0	T		400/2100		1.0		15 A		/12
★ 2N4400		1	SNA	0.31	A	40	O	0.6	50	150 m		200	T				.4		150 m		92/29
★ 2N4401		1	SNA	0.31	A	40	O	0.6	100	150 m		250	T				.4		150 m		92/29
★ 2N4402		1	SPA	0.31	A	40	O	0.6	50	150 m		150	T				.4		150 m		92/29
★ 2N4403		1	SPA	0.31	A	40	O	0.6	100	150 m		200	T				.4		150 m		92/29
★ 2N4404		1	SPA	5.0	C	80	O	0.5	40	150 m		200	T				.15		10 m		39/79
★ 2N4405		1	SPA	5.0	C	80	O	0.5	100	150 m		200	T				.15		10 m		39/79
★ 2N4406		1	SPA	5.0	C	80	O	0.15	30	500 m		150	T				.2		150 m		39/79
★ 2N4407		1	SPA	5.0	C	80	O	0.15	80	500 m		150	T				.2		150 m		39/79
★ 2N4409		1	SNA	0.31	A	50	O	0.25	60	1.0 m		60	T				.2		1.0 m		92/29
★ 2N4410		1	SNA	0.31	A	80	O	0.25	60	1.0 m		60	T				.2		1.0 m		92/29
D 2N4411			SPA	0.15	A	12	O	.025	40	0.5 m		400	T	0.7							72/
2N4412			SNE	0.6	A	30	O	0.6	100	10 u		100	T	10				2.0	AUD		5/
2N4412A			SPE	0.6	A	60	O	0.6	100	10 u		20	T	10				2.0	AUD		5/
2N4413			SPE	0.4	A	30	O	0.6	100	10 u		20	T	10				2.0	AUD		18/
2N4413A			SPE	0.4	A	60	O	0.6	100	10 u		20	T	10				2.0	AUD		18/
2N4414			SPE	0.6	A	30	O	0.6				100	T	10				3.0	AUD		5/
2N4414A			SPE	0.6	A	60	O	0.6	40	10 u		20	T	10				3.0	AUD		5/
2N4415			SPE	0.4	A	30	O	0.6				100	T	10				3.0	AUD		18/
2N4415A			SPE	0.4	A	60	O	0.6	40	10 u		20	T	10				3.0	AUD		18/
2N4416A			FET	Table 9																
2N4418	2N4264		SNS	0.25	A	40	S	0.2	40	10 m		500	T		20/22						
2N4419	2N4264		SNS	0.25	A	30	S	0.2	30	10 m		400	T		22/28						
2N4420	MPS3646		SNS	0.25	A	40	S	0.2	30	30 m		350	T		16/20						
2N4421	MPS3646		SNS	0.25	A	30	S	0.2	25	30 m		300	T		18/24						
2N4423	MPS3640		SNS	0.25	A	12	S	0.2	40	30 m		400	T		40/50						
2N4424	MPS3711		SNA	0.36	A	40	O	0.5	180	2.0 m											98/
2N4425	MPS3711		SNA	0.56	A	40	O	0.5	180	2.0 m											
★ 2N4427		1	SNP	3.5	C	36	S	0.4	10	0.1 A		500	T	4.0	1.0/		10		175	M	39/79
★ 2N4428		1	SNP	3.5	C	35	O	.425	20	50 m		700	T	3.5	0.75/		10		500	M	39/79
2N4429			SNA	5.0	C	35	O	.425	20	.05 A		700	T	3.5							
2N4430			SNA	10	C	40	O	1.0	20	0.1 A		600	T	5.0							
2N4431			SNA	18	C	40	O	2.0	20	0.1 A		600	T	10							
2N4432			SNE	0.6	A	30	O	0.2	40	6.0 m		65	T	4.2				20	1000	H	5/
2N4432A			SNE	0.6	A	30	O	0.2	80	6.0 m		70	T	10				20	1000	H	5/
2N4436			SNP	0.2	A	30	O	0.5	40	150 m		250	T	8.0	60/		10		30	M	
2N4437			SNP	0.2	A	30	O	0.5	100	150 m		250	T	8.0	60/		10		30	M	
2N4438			SNA	1.0	A	300	O	0.2	40	50 m		30	T	20			1.0		100 m		
2N4439			SNA	1.0	A	300	O	0.2	100	50 m		30	T	20			1.0		100 m		39/
2N4441	THRU		THY	Table 6																
2N4444			THY	Table 6																
2N4445	THRU		FET	Table 9																
★ 2N4448			FET	Table 9																
★ 2N4449			SNA	0.3	A	40	O	0.2	40	10 m		500	T				.18		10 m		46/
★ 2N4450		1	SNA	0.3	C	30	O	0.5	75	10 m		250	T				.22		150 m		46/
D 2N4451			SPA	0.3	A	12	O	0.1	40	30 m		400	T				.25		30 m		46/
2N4452			SPA	0.35	A	45	O	0.6	115	50 m		200	T				.4		15 m		46/
D 2N4453		1	SPG	0.3	A	18	O	0.2	40	30 m		400	T		75/170		.25		30 m		46/
2N4576	2N3716		SNA	150	C	80	O		50	1.0 A		1.5	E				.8		5.0 A		
★ 2N4851	THRU		UJT	Table 8																

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C @ I_B	I_C & I_C	Unit	PACKAGE To-Case No.
★ 2N4853			UJT	Table 8																
★ 2N4854			SCE	0.3 A		40 O		0.6	50	1.0 m	200 T			*60/350*			**8.0**	**1000 H**		/654
★ 2N4855		1	SCE	0.3 A		40 O		0.6	25	1.0 m	200 T			*60/350*			**8.0**	**1000 H**		/654
2N4856	THRU		FET	Table 9																
2N4861			FET	Table 9																
2N4863	2N5334		SNA			120 O		2.0	50	0.5 A	50 T		50			.2		.5 A		5/
2N4864	2N5430		SNA			120 O		2.0	50	0.5 A	50 T		50			.2		.5 A		66/
2N4865			SNA	350 C		80 O		90	10	70 A	10 T					1.5		50 A		
2N4866			SNA	350 C		120 O		90	10	70 A	10 T					1.5		50 A		
★ 2N4867,A			FET	Table 9																
D 2N4870			UJT	Table 8																
D 2N4871			UJT	Table 8																
D 2N4872			SPS	0.7 C		12 O	0.05		50	10 m			3.0	*15/20*		.13		1.0 m		18/
2N4873			SNS	0.36 A		15 O	0.2		110	10 m			4.0	*12/13*		.2		10 m		18/
2N4874			SNH	0.72 A		20 O	0.2				900 T					10		400 M		39/
2N4875			SNH	0.72 A		25 O	0.2				800 T					9.5		400 M		39/
2N4876			SNH	0.72 A		30 O	0.2				650 T					8.5		400 M		39/
★ 2N4877		1	SNG	10 C		60 O	4.0		20	4.0 A	4.0 T			*100/6500*		1.0		4.0 A		39/
2N4878			**SNA**	0.3 C		60 O	0.01		200	10 u	200 T						**2.0**	**1000 H**		71/
2N4879			**SNA**	0.3 C		55 O	0.01		150	10 u	150 T						**3.0**	**1000 H**		71/
2N4880			**SNA**	0.3 C		45 O	0.01		80	10 u	150 T						**3.0**	**1000 H**		71/
2N4881	THRU		FET	Table 9																
2N4886			FET	Table 9																
2N4889			SPE	0.3 A		150 O	0.1		80	10 m	40 T		4.0				**3.0**	**10 K**		
★ 2N4890			SPG	1.0 A		40 O	0.5		50	150 m	100 T		15	*100/270*		1.4		150 m		5/
2N4891	THRU		UJT	Table 8																
2N4894			UJT	Table 8																
2N4895			SNS	4.0 C		60 O	5.0		40	2.0 A	50 T		80	*350/650*		1.0		5.0 A		39/
2N4896	2N5337		SNS	4.0 C		60 O	5.0		100	2.0 A	80 T		80	*350/650*		1.0		5.0 A		39/
2N4897	2N5337		SNS	4.0 C		80 O	5.0		40	2.0 A	50 T		80	*350/650*		1.0		5.0 A		39/
★ 2N4898		1	SPA	25 C		40 O	1.0		20	0.5 A	3.0 T		100			.6		1.0 A		66/80
★ 2N4899		1	SPA	25 C		60 O	1.0		20	0.5 A	3.0 T		100			.6		1.0 A		66/80
★ 2N490B			UJT	Table 8																
★ 2N4900		1	SPA	25 C		80 O	1.0		20	0.5 A	3.0 T		100			.6		1.0 A		66/80
★ 2N4901		1	SPA	87.5 C		40 O	5.0		20	1.0 A	4.0 T					.4		1.0 A		3/11
★ 2N4902		1	SPA	87.5 C		60 O	5.0		20	1.0 A	4.0 T					.4		1.0 A		3/11
★ 2N4903		1	SPA	87.5 C		80 O	5.0		20	1.0 A	4.0 T					.4		1.0 A		3/11
★ 2N4904			SPA	87.5 C		40 O	5.0		25	2.5 A	4.0 T					1.0		2.5 A		3/11
★ 2N4905		1	SPA	87.5 C		60 O	5.0		25	2.5 A	4.0 T					1.0		2.5 A		3/11
★ 2N4906		1	SPA	87.5 C		80 O	5.0		25	2.5 A	4.0 T					1.0		2.5 A		3/11
2N4907			SPA	150 C		40 O	10		20	4.0 A	4.0 T		600			.75		4.0 A		3/
2N4909			SPA	150 C		80 O	10		20	4.0 A	4.0 T		600			.75		4.0 A		3/
★ 2N4910		1	SNA	25 C		40 O	1.0		20	0.5 A	3.0 T		100			.6		1.0 A		66/80
★ 2N4911		1	SNA	25 C		60 O	1.0		20	0.5 A	3.0 T		100			.6		1.0 A		66/80
★ 2N4912		1	SNA	25 C		80 O	1.0		20	0.5 A	3.0 T		100			.6		1.0 A		66/80
★ 2N4913		1	SNA	87.5 C		40 O	5.0		25	2.5 A	4.0 T					1.0		2.5 A		3/11
★ 2N4914		1	SNA	87.5 C		60 O	5.0		25	2.5 A	4.0 T					1.0		2.5 A		3/11
★ 2N4915		1	SNA	87.5 C		80 O	5.0		25	2.5 A	4.0 T					1.0		2.5 A		3/11
2N4916			SPF	0.5 C		30 O	0.1		70	10 m	400 T			*40/150*			**6.0**	**100 M**		
2N4917			SPF	0.5 C		30 O	0.1		150	10 m	450 T			*40/150*			**6.0**	**100 M**		
★ 2N4918		1	SPA	30 C		40 O	1.0		20	0.5 A	3.0 T		100			.6		1.0 A		/77
★ 2N4919		1	SPA	30 C		60 O	1.0		20	0.5 A	3.0 T		100			.6		1.0 A		/77
★ 2N4920		1	SPA	30 C		80 O	1.0		20	0.5 A	3.0 T		100			.6		1.0 A		/77
★ 2N4921		1	SNA	30 C		40 O	1.0		20	0.5 A	3.0 T		100			.6		1.0 A		/77
★ 2N4922			SNA	30 C		60 O	1.0		20	0.5 A	3.0 T		100			.6		1.0 A		/77
★ 2N4923		1	SNA	30 C		80 O	1.0		20	0.5 A	3.0 T		100			.6		1.0 A		/77
★ 2N4924			SNA	1.0 A		100 O	0.2		40	150 m	100 T					.4		50 m		39/79
★ 2N4925		1	SNA	1.0 A		150 O	0.2		40	150 m	100 T					.4		50 m		39/79
★ 2N4926		1	SNA	5.0 A		200 O	0.05		20	30 m	300 T					2.0		30 m		39/79
★ 2N4927		1	SNA	5.0 A		250 O	0.05		20	30 m	300 T					2.0		30 m		39/79
★ 2N4928			SPA	3.0 C		100 O	0.1		25	10 m	100 T					.5		10 m		39/79
★ 2N4929			SPA	5.0 C		150 O	0.5		25	10 m	100 T					.5		10 m		39/79
★ 2N4930			SPA	5.0 C		200 O	0.5		20	10 m	20 T					5.0		10 m		39/79
★ 2N4931			SPA	5.0 C		250 O	0.5		20	10 m	20 T					5.0		10 m		39/79
2N4932	2N5477		SNA	70 C		25 O	3.3		10	1.0 A	100 T		120							60/
2N4933	2N5477		SNA	70 C		35 O	3.3		10	1.0 A	100 T		85							60/
2N4934			SNF	0.2 A		30 O			40	2.0 m	700 T					**18**	**3.5**	**200 M**		104/
2N4935			SNF	0.2 A		40 O			60	2.0 m	700 T					**21**	**3.6**	**200 M**		104/
2N4936			SNF	0.2 A		40 O			60	2.0 m	700 T					**18**	**4.5**	**450 M**		104/
★ 2N4937		1	**SPM**	0.6 A		40 O	0.05		50	1.0 m	300 T									/654

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C @ I_B	& I_C	Unit	PACKAGE To-Case No. No.
★ 2N4938		1	SPM	0.6	A	40	0	0.05	50	1.0 m	300	T								/654
★ 2N4939		1	SPA	0.6	A	40	0	0.05	50	1.0 m	300	T					4.0			/654
★ 2N4940		1	SPM	0.6	A	40	0	0.05	50	1.0 m	300	T								89/610
★ 2N4941		1	SPM	0.6	A	40	0	0.05	50	1.0 m	300	T								89/610
★ 2N4942		1	SPA	0.6	A	40	0	0.05	50	1.0 m	300	T				.3	4.0	150	m	89/610
2N4943			SNA	0.8	A	80	0	1.0	100	150 m	45	T				.25		150	m	5/
2N4944			SNA	0.6	C	40	0	0.5	40	150 m	60	T				.25		150	m	106/
2N4945			SNA	0.6	C	60	0	0.5	40	150 m	60	T				.25		150	m	106/
2N4946			SNA	0.6	C	40	0	0.5	100	150 m	60	T								
2N4948			UJT	Table 8																
2N4949			UJT	Table 8																
2N4950	MJ7000		SNS	300	C	60	0	70	10	50 A	0.1	T		0.1/0.2		1.5		50	A	
2N4951			SNG	0.36	A	30	0	0.5	60	150 m	250	T		40/400		.3		150	m	98/
2N4952			SNG	0.36	A	30	0	0.5	100	150 m	250	T		40/400						98/
2N4953			SNG	0.36	A	30	0	0.5	200	150 m	250	T		40/400		.3		150	m	98/
2N4954			SNG	0.36	A	30	0	0.5	60	150 m	250	T		40/400		.3		150	m	98/
2N4955			SNE	0.75	C	25	0	0.03	60	10 u	60	T					4.5	1000	H	
2N4956			SNA	0.75	C	25	0	0.03	60	10 u	60	T					4.5	1000	H	
★ 2N4957			SPF	0.2	A	30	0	0.03	20	2.0 m	1200	M	0.8			17	3.0	450	M	72/20
★ 2N4958		1	SPF	0.2	A	30	0	0.03	20	2.0 m	1000	M	0.8			16	3.3	450	M	72/20
★ 2N4959		1	SPF	0.2	A	30	0	0.03	20	2.0 m	1000	M	0.8			15	3.8	450	M	72/20
2N4960			SNG	0.8	A	60	0	1.0	100	150 m	250	T		150/1000		.7		10	m	39/
2N4961			SNG	0.5	A	80	0	1.0	100	150 m	250	T		150/1000		.7		10	m	39/
2N4962			SNG	0.8	A	60	0	1.0	100	150 m	250	T		150/1000		.7		10	m	18/
2N4963			SNG	0.5	A	80	0	1.0	100	150 m	250	T		150/1000		.7		10	m	18/
2N4964			SPE	0.2	A	40	0	0.1	30	10 u	60	T					6.0	1000	H	106/
2N4965			SPE	0.2	A	40	0	0.1	80	10 u	60	T					6.0	1000	H	106/
2N4966			SNE	0.2	A	40	0	0.03	40	10 u	60	T					6.0	1000	H	106/
2N4967			SNE	0.2	A	40	0	0.03	100	10 u	40	T					6.0	1000	H	
2N4968			SNE	0.2	A	25	0	0.03	40	10 u	40	T					6.0	1000	H	106/
2N4969			SNG	0.2	A	30	0	0.5	40	150 m	200	T	8.0	55/380		.4		150	m	106/
2N4970			SNG	0.2	A	30	0	0.5	100	150 m	200	T	8.0	65/390		.4		150	m	106/
2N4971			SPG	0.2	A	40	0	0.5	40	150 m	200	T	8.0	80/200		.4		150	m	106/
2N4972			SPG	0.2	A	40	0	0.5	100	150 m	200	T	8.0	90/235		.4		150	m	106/
D 2N4973			SPF	0.2	A	15	0	0.03	20	3.0 m	400	T					6.0	60	M	106/
2N4974			SPE	0.8	A	30	0	1.0	5000	1.0 u	175	T	8.0				6.0			12/34
2N4975			SPE	0.8	A	30	0	1.0	1000	1.0 u	175	T	8.0				6.0			12/34
2N4977	THRU		FET	Table 9																
2N4979			FET	Table 9																
2N4980			SPC	0.4	A	30	0	0.1	60	1.0 m	10	T	10							46/
2N4981			SPC	0.4	A	50	0	0.1	40	1.0 m	5.0	T	10							46/
2N4982			SPC	0.4	A	70	0	0.1	30	1.0 m	3.0	T	10							46/
2N4983	THRU		THY	Table 6																
2N4993			THY	Table 6																
2N4994			SNA	0.2	A	45	0	0.03	40	10 m	200	T	3.5							
2N4995			SNA	0.2	A	45	0	0.03	100	10 m	200	T	3.5							
2N4996			SNA	0.2	A	18	0	0.05	50	2 m	600	T								
2N4997			SNA	0.2	A	18	0	0.05	30	2 m	600	T								
2N4998	2N5347		SNA	30	C	80	0	2.0	30	1.0 A	50	T				5.0		3.0	A	59/
2N4999	2N6186		SPA	30	C	80	0	2.0	30	1.0 A	50	T				5.0		3.0	A	59/
2N5000	2N5348		SNA	30	C	80	0	2.0	70	1.0 A	60	T				5.0		3.0	A	59/
2N5001	2N6187		SPA	30	C	80	0	2.0	70	1.0 A	60	T								59/
2N5002	2N5347		SNA	50	C	80	0	5.0	30	2.5 A	60	T				1.5		5.0	A	59/
2N5003	2N6186		SPA	50	C	80	0	5.0	30	2.5 A	60	T				1.5		5.0	A	59/
2N5004	2N5348		SNA	50	C	80	0	5.0	70	2.5 A	70	T				1.5		5.0	A	59/
2N5005	2N6187		SPA	50	C	80	0	5.0	70	2.5 A	70	T				1.5		5.0	A	59/
2N5006			SNA	100	C	80	0	10	30	5.0 A	30	T				1.5		5.0	A	
2N5007			SPA	100	C	80	0	10	30	5.0 A	30	T				1.5		5.0	A	
2N5008			SNA	100	C	80	0	10	70	5.0 A	40	T				1.5		5.0	A	
2N5009			SPA	100	C	80	0	10	70	5.0 A	40	T				1.5		5.0	A	
2N5010			SNA	2.0	C	500	R	0.5	30	25 m	20	T	30			1.4		25	m	5/
2N5011			SNA	2.0	C	600	R	0.5	30	25 m	20	T	30			1.5		25	m	5/
2N5012			SNA	2.0	C	700	R	0.5	30	25 m	20	T	30			1.6		25	m	5/
2N5013			SNA	2.0	C	800	R	0.5	30	20 m	20	T	30			1.6		20	m	5/
2N5014			SNA	2.0	C	900	R	0.5	30	20 m	20	T	30			1.6		20	m	5/
★ 2N5016			SNP	30	C	30	0	4.5	10	500 m	500	T	25	15/		4.7		400	M	60/36
D 2N5017			SNA	30	C	30	0	4.5	10	0.5 A	500	T	25							
2N5018	THRU		FET	Table 9																
2N5021			FET	Table 9																
2N5022			SPG	1.0	A	50	0	0.5	25	500 m	1700	T	25	45/90		.2		100	m	5/

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TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF dB Max	@ f	Unit	PACKAGE To- No.	Case No.
														t_{on} ns Max	t_{off} ns Max	$V_{CE(sat)}$ Volts Max	I_C @ I_B	& I_C			
2N5023			SPG	1.0	A	30	O	0.5	40	500 m	2000	T	25	45/90		.17		100 m		39/	
2N5024			SNA	0.2	A	10	O	0.15	25	10 m	1300	T								72/	
2N5025			SNP	45	C	75	O	5.0	20	2.0 A	150	T				7.5		50 M		60/	
2N5026			SNP	45	C	90	O	5.0	20	2.0 A	150	T				10		80 M		60/	
2N5027			SNA	0.32	A	30	O	0.35	50	150 m	250	T				.45		150 m		98/	
2N5028			SNA	0.32	A	30	O	0.35	100	150 m	250	T				.45		150 m		98/	
2N5029			SNA	0.32	A	15	O	0.2	40	10 m	500	T				.25		10 m		98/	
2N5030			SNA	0.32	A	12	O	0.2	30	10 m	400	T				.25		10 m		98/	
★ 2N5031			SNF	0.2	A	10	O	0.02	25	1.0 m	1000	T				14	2.5	450 M		72/20	
★ 2N5032		2	SNF	0.2	A	10	O	0.02	25	1.0 m	1000	T				14	3.0	450 M		72/20	
2N5033			FET	Table 9																	
2N5034	2N5877		SNA	83	C	45	R	6.0	20	2.5 A						2.5		6.0 A			
2N5035	2N5877		SNA	83	C	45	R	6.0	20	3.0 A						3.0		8.0 A			
2N5036	2N5877		SNA	83	C	60	R	8.0	20	3.0 A						2.5		6.0 A			
2N5037	2N5877		SNA	83	C	60	R	8.0	20	3.0 A						3.0		8.0 A			
2N5039			SNG	140	C	120	V	20	20	10 A	60	T		500/2000		2.5		20 A		3/	
2N5040			SPA	0.3	A	25	O	1.0	30	150 m	100	T				1.0		.5 A			
2N5041			SPA	0.3	A	40	O	1.0	40	150 m	80	T				1.0		.5 A			
2N5042			SPA	0.8	A	40	O	1.0	40	150 m	100	T				1.1		.5 A			
2N5043			GPF	0.03	A	7.0	O	0.03		3.0 m	1400	T					2.5	400 M		72/	
2N5044			GPF	0.03	A	7.0	O	0.03		3.0 m	1000	T					3.5	400 M		72/	
2N5045	THRU		FET	Table 9																	
2N5047			FET	Table 9																	
★ 2N5050		2	SNG	40	C	120	O	2.0	35	0.5 A	20	T	250	300/4700		.9		.5 A		66/80	
★ 2N5051		2	SNG	40	C	150	O	2.0	35	0.5 A	20	T	250	300/4700		.9		.5 A		66/80	
★ 2N5052		2	SNG	40	C	200	O		35	0.5 A	20	T	250	300/4700		.9		.5 A		66/80	
2N5053			SNF	0.2	A	15	O	0.25	25	2.0 m	1300	T					3.5	200 M		72/	
2N5054			SNF	0.2	A	15	O	0.25	25	2.0 m	1000	T					3.5	200 M		72/	
2N5055			SPS	0.2	A	12	O	0.1	30	30 m	550	T		20/25		.13		1.0 m		18/	
2N5056			SPS	0.36	A	15	O	0.1	30	30 m	600	T		20/35		.13		1.0 m		18/	
2N5057			SPS	0.36	A	15	O	0.1	40	30 m	800	T		20/35		.13		1.0 m		5/	
2N5058			SNA	1.0	C	300	O	0.15	35	30 m	30	T								5/	
2N5059			SNA	1.0	C	250	O	0.15	30	30 m	30	T									
2N5060	THRU		THY	Table 6																	
2N5064			THY	Table 6																	
2N5065			SNS	2.5	C	15	O	0.5	50	300 m	550	T		15/35		.23		100 m		46/	
2N5066			SNC	0.4	A	20	O	0.1			5.0	T	10								
★ 2N5067		2	SNA	87.5	C	40	O	5.0	20	1.0 A	4.0	T				.4		1.0 A		3/11	
★ 2N5068		2	SNA	87.5	C	60	O	5.0	20	1.0 A	4.0	T				.4		1.0 A		3/11	
★ 2N5069		2	SNA	87.5	C	80	O	5.0	20	1.0 A	4.0	T				.4		1.0 A		3/11	
★ 2N5070		2	SNP	70	C	65	S	3.3	10	3.0 A	100	T	85	25/		13		30 M		60/36	
2N5071			SNA	70	C	30	O	3.3	10	3.0 A	100	T	85							60/	
2N5072			SNA	125	C	100	R	10	15	3.0 A	40	T	600			1.0		10 A			
2N5073			SNA	0.6	A	120	O	0.4	30	200 m	40	T	25							5/31	
2N5074			SNA	70	C	200	O	3.0	30	0.5 A	40	T				2.0		3.0 A		59/	
2N5075			SNA	70	C	200	O	3.0	90	0.5 A	40	T								59/	
2N5076			SNA	70	C	250	O	3.0	30	0.5 A	40	T								59/	
2N5078			FET	Table 9																	
2N5079			SNE	1.8	C	30	O	1.0	100	150 m	400	T	7.0				4.0	200 H		18/	
2N5080			SNE	1.8	C	30	O	1.0	200	150 m	500	T	7.0				4.0	200 H		18/	
2N5081			SNE	1.2	C	50	O		100	1.0 m	600	T					4.0	1.0 K		18/	
2N5082			SNE	1.2	C	30	O		100	1.0 m	600	T					4.0	1.0 K		18/	
2N5083			SNA	35	C	60	O	10	40	2.0 A	50	T				1.0		10 A		59/	
2N5084			SNA	35	C	60	O	10	100	2.0 A	80	T				1.0		10 A		59/	
2N5085			SNA	35	C	80	O	10	40	2.0 A	50	T				1.0		10 A		59/	
★ 2N5086		2	SPE	0.31	A	50	O	0.05	150	0.1 m	40	T	4.0				3.0	1000 H		92/29	
★ 2N5087		2	SPE	0.31	A	50	O	0.05	250	0.1 m	40	T	4.0				2.0	1000 H		92/29	
★ 2N5088		2	SNE	0.31	A	30	O	0.05	300	0.1 m	50	T					3.0			92/29	
★ 2N5089		2	SNE	0.31	A	25	O	0.05	400	0.1 m	50	T					2.0			92/29	
★ 2N5090			SNP	5.0	C	30	O	0.4	10	50 m	500	T	3.5	1.2/		7.7		400 M		60/36	
2N5091			SPA	2.0		300	O	1.0	40	25 m	20	T	20			3.0		25 m		5/	
2N5092			SNA	2.0		350	O	1.0	50	25 m	50	T	15			.5		25 m		5/	
2N5093			SPA	2.0		350	O	1.0	40	25 m	20	T	20			3.0		25 m		5/	
2N5094			SPA	2.0		400	O	1.0	40	25 m	20	T	20			3.0		25 m		5/	
2N5095			SNA	2.0		400	O	1.0	50	25 m	50	T	15			.5		25 m		5/	
2N5096			SPA	2.0		450	O	1.0	40	25 m	20	T	20			3.0		25 m		5/	
2N5097			SNA	2.0		450	O	1.0	50	25 m	50	T	15			.5		25 m		5/	
2N5098			SNA	2.0		500	O	1.0	50	25 m	50	T	15			.5		25 m		5/	
2N5099		2	SNA	2.0		550	O	1.0	50	25 m	50	T	15			.5		25 m		5/	
2N5100			SPA	10		400	O	1.0	40	25 m	20	T	20			3.0		25 m			

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C @ I_B	& I_C	Unit	PACKAGE To-Case No. / No.
2N5101			SNA	10		400	O	1.0	50	25	m	50	T				.5			25	m	
2N5102			SNA	70	C	50	R	3.3	10	500	m	150	T	85								60/
2N5103	THRU		FET	Table 9																		
2N5105			FET	Table 9																		
2N5107			SNS	1.8	C	30	O	0.5	100	150	m	250	T		65/550		.22			150	m	18/
★ 2N5108		2	SNP	3.5	C			0.4				1200	T	3.0	1.0/		5.0			1.0	G	39/79
★ 2N5109		2	SNP	2.5	C	20	O	0.4	40	50	m	1200	T	3.5	.001/		11			200	M	39/79
2N5110		2	SPA	5.0	C	40	O	1.0	15	500	m	1.0	T	500			.9			500	m	5/
2N5111			SPA	5.0	C	80	O	1.0	15	500	m	1.0	T	500			.9			500	m	5/
2N5112			SPA	34	C	40	O	1.0	15	500	m	1.0	T	500			.9			500	m	59/
2N5113			SPA	34	C	80	O	1.0	15	500	m	1.0	T	500			.9			500	m	69/
2N5114	THRU		FET	Table 9																		
2N5116			FET	Table 9																		
2N5117			SPA	0.4	C	45	O	0.01	100	010	m	100	T					4.0		1000	H	78/
2N5119			SPA	0.4	C	45	O	0.01	50	010	m	100	T					4.0		1000	H	78/
2N5120			SPA	0.3	C	45	O	0.01	100	010	m	100	T					4.0		1000	H	71/
2N5121			SPA	0.3	C	45	O	0.01	100	010	m	100	T					4.0		1000	H	71/
2N5122			SPA	0.3	C	45	O	0.01	50	010	m	100	T					4.0		1000	H	71/
2N5123			SPA	0.4	C	45	O	0.01	100	010	m	100	T					4.0		1000	H	
2N5124			SPA	0.4	C	45	O	0.01	100	010	m	100	T					4.0		1000	H	
2N5125			SPA	0.4	C	45	O	0.01	50	010	m	100	T					4.0		1000	H	
2N5126	MPS6539		SNA	0.2	A	20	O	0.03	20	4	m						2.0			10	m	106/
2N5127	MPS918		SNA	0.2	A	12	O	0.1	15	2	m	150	T				.3			10	m	106/
2N5128	2N5220		SNA	0.2	A	12	O	0.5	35	50	m	200	T				.25			150	m	105/
2N5129	2N5220		SNA	0.3	A	12	O	0.5	35	50	m	200	T				.25			150	m	106/
2N5130	MPS3563		SNA	0.2	A	12	O	0.05	15	8	m	450	T				.6			10	m	106/
2N5131	2N5223		SNA	0.2	A	15	O	0.2	30	10	m						1.0			10	m	106/
2N5132	MPS6539		SNA	0.2	A	20	O	0.03	30	10	m						2.0			10	m	106/
2N5133	MPS2714		SNA	0.2	A	18	O	0.05	60	1.0	m						.4			1.0	m	106/
2N5134	2N5224		SNS	0.2	A	10	O	0.1	20	10	m	250	T		18/18		.2			10	m	106/
2N5135	2N5225		SNA	0.3	A	25	O	0.2	50	10	m	40	T				1.0			100	m	105/
2N5136	MPS3706		SNA	0.22	A	20	O	0.5	20	150	m	40	T				.25			150	m	105/
2N5137	MPS6560		SNA	0.3	A	20	O	0.5	20	150	m	40	T				.25			150	m	106/
2N5138	MPS6516		SPA	0.2	A	30	O	0.1	50	100	u						.3			10	m	106/
2N5139	MPS6516		SPG	0.2	A	20	O	0.1	40	1.0	m	300	T		50/200		.15			1.0	m	106/
2N5140	MPS6518		SPS	0.2	A	5.0	O	0.05	20	10	m	400	T		20/20							106/
2N5141			SPG	0.2	A	6	O	0.1	30	30	m	300	T		90/150		.2			10	m	106/
2N5142			SPG	0.3	A	20	O	0.5	30	50	m	100	T		100/200		.5			50	m	105/
2N5143			SPG	0.2	A	20	O	0.5	30	50	m	100	T		100/200		.5			50	m	106/
D 2N5144			SNS	1.2	C	30	O	0.5	60	100	m	300	T		25/40		.2			100	m	18/
2N5145			SNS	3.5	C	30	O	0.5	60	100	m	300	T		25/40		.2			100	m	39/
★ 2N5146		2	SPA	0.4	A	40	O	1.5	20	1.0	A	150	T				1.0			1.0	A	86/607
2N5147	2N6190		SPA	1.0	A	80	O	2.0	30	1.0	A	50	T				5.0			3.0	A	39/
2N5148	2N5336		SNA	1.0	A	80	O	2.0	30	1.0	A	50	T				5.0			3.0	A	39/
2N5149	2N6191		SPA	1.0	A	80	O	2.0	70	1.0	A	60	T				5.0			3.0	A	39/
2N5150	2N5337		SNA	1.0	A	80	O	2.0	70	1.0	A	60	T				5.0			3.0	A	39/
2N5151	2N6190		SPA	1.0	A	80	O	5.0	30	2.5	A	60	T				1.5			5.0	A	39/
2N5152	2N5336		SNA	1.0	A	80	O	2.0	30	2.5	A	60	T				1.5			5.0	A	39/
2N5153	2N6191		SPA	1.0	A	80	O	5.0	70	2.5	A	70	T				1.5			5.0	A	39/
2N5154	2N5337		SNA	1.0	A	80	O	2.0	70	2.5	A	70	T				1.5			5.0	A	39/
★ 2N5155			GPA			120	O	15	25	8.0	A	0.1	T				.9			25	A	3/11
2N5156			GPS	93	C	60	O	10	25	5.0	A	0.15	T		200/650		1.0			10	A	3/
★ 2N5157	2N5157	1	GPG	100	C	500	O	3.5	30	1.0	A	2.8	T	150	800/1700		2.5			3.5	A	
★ 2N5158			FET	Table 9																		
★ 2N5159			FET	Table 9																		
★ 2N5160		2	SNP	5.0	C	40	O	0.4	10	50	m	500	T	4.0	1.0/		8.0			400	M	39/79
★ 2N5161		2	SNP	20	C	40	O	1.5	10	250	m	500*	T	15	7.5/		8.8			175	M	60/36
★ 2N5162		2	SNP	50	C	40	O	5.0	10	2.0	A	500*	T	60	30/		6.0			175	M	60/36
★ 2N5163			FET	Table 9																		
2N5164	THRU		THY	Table 6																		
2N5171			THY	Table 6																		
2N5172			SNA	0.2	A	25	O	0.1	100	10	m						.25			10	m	92/
2N5174			SNA	0.2	A	75	O	.025	40	10	m						.95			10	m	98/
2N5175			SNA	0.2	A	100	O	.025	55	10	m						.95			10	m	98/
2N5176			SNA	0.2	A	100	O	.025	140	10	m						.95			10	m	98/
2N5177			SNA	40	C	35	O	4.0	10	100	m	200	T	30								
2N5178			SNA	70	C	35	O	8.0	10	200	m	200	T	60								
★ 2N5179		2	SNF	0.2	A	12	O	0.05	25	3.0	m	900	T				15	4.5		200	M	72/20
2N5180			SNH	0.18	A	15	O		20	2.0	m	650	T				12			200	M	104/
2N5181			SNA	0.18	A	45	B	0.05	27	1.0	m	400	T									104/

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TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C / I_B	& I_C	Unit	PACKAGE To-Case No. No.
2N5182			SNA	0.18	A	35	B	0.4	27	1.0 m	400	T								104/
2N5183			SNA	0.5	A	18	O	1.0	75	10 m	62.5	T								104/
2N5184			SNA	0.5	A	120	O	0.05	10	50 m	50	T								104/
2N5185			SNA	1.0	A	120	O	0.05	10	50 m	50	T								
2N5186			SNS	0.3	A	5	S	0.3	25	10 m	400	T		*25/25*		*.3*		*10 m*		52/
2N5187			SNS	1.0	A	25	S	0.5	30	10 m	400	T		*18/21*		*.25*		*10 m*		52/
2N5188			SNS	0.8	A	55	S	1.0	25	150 m				*35/50*		*.5*		*150 m*		39/
2N5189			SNG	0.8	A	55	S	2.0	15	1.0 m				*40/70*		*1.0*		*1.0 A*		
★ 2N5190		2	SNA	40	C	40	O	4.0	25	1.5 A	2.0	T				*1.4*		*4.0 A*		/77
★ 2N5191		2	SNA	40	C	60	O	4.0	25	1.5 A	2.0	T				*1.4*		*4.0 A*		/77
★ 2N5192		2	SNA	40	C	80	O	4.0	20	1.5 A	2.0	T				*1.4*		*4.0 A*		/77
★ 2N5193		2	SPA	40	C	40	O	4.0	25	1.5 A	2.0	T				*1.4*		*4.0 A*		/77
★ 2N5194		2	SPA	40	C	60	O	4.0	25	1.5 A	2.0	T				*1.4*		*4.0 A*		/77
★ 2N5195		2	SPA	40	C	80	O	4.0	20	1.5 A	2.0	T				*1.4*		*4.0 A*		/77
2N5196	THRU		FET	Table 9																
2N5199			FET	Table 9																
2N5200			THY	Table 6																
2N5202	2N5427		SNG	35	C	75	V	4.0	10	4.0 A	60	T		*400/1600*		*1.2*		*4.0 A*		66/
2N5204			THY	Table 6																
2N5205			THY	Table 6																
★ 2N5207			THY	Table 6																
★ 2N5208		2	SPF	0.31	A	25	O	0.05	20	2.0 m	300	T				**22**	**3.0**	**100 M**		92/29
★ 2N5209		2	SNE	0.31	A	50	O	0.05	100	0.1 m	30	T	4.0				**3.0**	**1000 H**		92/29
★ 2N5210			SNE	0.31	A	50	O	0.05	200	0.1 m	30	T	4.0				**3.0**	**1000 H**		92/29
D 2N5211			SNA	3.0	C	80	O	0.6	10	0.2 A	200	T	12			*.5*		*.54 A*		37/
2N5213			SNA	7.5	C	40	O	0.5	10	0.2 A	350	T	15			*.5*		*.5 A*		37/
2N5214			SNA	60	C	95	S	5.0	10	1.0 A	150	T	100			*1.5*		*4.5 A*		
2N5215			SNA	23	C	70	O	1.0	10	0.5 A	400	T	25			*.5*		*1.0 A*		60/
2N5216			SNA	25	C	80	O	1.5	10	0.5 A	350	T	30			*1.2*		*1.5 A*		
2N5217			SNA	7.5	C	80	O	0.5	10	0.2 A	350	T	12			*.5*		*.5 A*		
2N5218			SNG	50	C	200	O	10	15	5.0 A	40	T	200	*600/5500*		*.6*		*5.0 A*		61/
★ 2N5219		2	SNA	0.31	A	15	O	0.1	35	2.0 m	150	T				*.4*		*10 m*		92/29
★ 2N5220		2	SNA	0.31	A	15	O	0.5	30	50 m	100	T				*.5*		*150 m*		92/29
★ 2N5221		2	SPA	0.31	A	15	O	0.5	30	50 m	100	T				*.5*		*150 m*		92/29
★ 2N5222		2	SNA	0.31	A	15	O	0.05	20	4.0 m	450	T				*1.0*		*4.0 m*		92/29
★ 2N5223		2	SNA	0.31	A	20	O	0.1	50	2.0 m	150	T				*.7*		*10 m*		92/29
★ 2N5224		2	SNA	0.31	A	12	O	0.1	40	10 m	250	T				*.35*		*10 m*		92/29
★ 2N5225		2	SNA	0.31	A	25	O	0.5	30	50 m	50	T				*.8*		*100 m*		92/29
★ 2N5226		2	SPA	0.31	A	25	O	0.5	30	50 m	50	T				*1.0*		*100 m*		92/29
★ 2N5227		2	SPA	0.31	A	30	O	0.05	50	2.0 m	100	T				*.4*		*10 m*		92/29
★ 2N5228		2	SPA	0.31	A	5	O	0.05	30	10 m	300	T				*.4*		*10 m*		92/29
★ 2N5229		2	SPC	2.0	C	10	O	0.05	50	100 u										46/26
★ 2N5230		2	SPC	2.0	C	20	O	0.05	50	100 u										46/26
★ 2N5231		2	SPC	2.0	C	30	O	0.05	50	100 u										46/26
2N5232			SNA	0.33	A	50	O	0.1	250	2.0 m						*.12*		*10 m*		98/
2N5233			SNA	0.33	A	60	O	0.1	100	10 m						*.12*		*10 m*		98/
2N5234			SNA	0.33	A	60	O	0.1	250	10 m						*.12*		*10 m*		98/
2N5235			SNA	0.33	A	60	O	0.1	400	10 m						*.12*		*10 m*		98/
2N5236			SNH	1.0	C	20	O	0.15	30	50 m	500	T				**6.0**		**250 M**		39/
2N5237	2N5337		SNG	5.0	C	120	O	5.0	40	5.0 A	25	T		*500/2000*		*.6*		*5.0 A*		5/
2N5238			SNG	5.0	C	170	O	5.0	40	5.0 A	25	T		*500/2000*		*.6*		*5.0 A*		5/
2N5239			SNA	100	C	225	O	5.0	20	2.0 A	5.0	T				*5.0*		*4.5 A*		3/
2N5240			SNA	100	C	300	O	5.0	20	2.0 A	5.0	T				*5.0*		*4.5 A*		3/
★ 2N5241		2	SNG	125	C	400	O	5.0	15	2.5 A	2.5	T		*800/1700*		*2.5*		*5.0 A*		3/11
D 2N5242			SPG	0.5	A	20	O	0.5	25	500 m	170	T		*40/90*		*.38*		*500 m*		105/
2N5243			SPG	0.5	A	30	O	0.5	25	500 m	170	T		*40/90*		*.38*		*500 m*		105/
2N5244			SPS	1.0	C	40	O	0.1	150	10 m				*40/200*		*.12*		*10 m*		18/
2N5245	THRU		FET	Table 9																
2N5248			FET	Table 9																
2N5249			SNA	0.33	A	50	O	0.1	400	2.0 m						*.12*		*10 m*		98/
2N5250			SNG	350	C	100	O	90	10	70 A	10	T		*2000/2000*						
2N5251			SNG	350	C	150	O	90	10	70 A	10	T		*2000/2000*						
2N5252			SNA	7.0	C	300	O	1.0	40	100 m	30	T				*1.0*		*200 m*		39/
2N5253			SNA	7.0	C	300	O	1.0	80	100 m	30	T				*1.0*		*200 m*		39/
2N5254			SPE	0.8	C	40	O	0.05	50	0.1 m	40	T					**3.0**	**1000 H**		
2N5255			**SPA**	0.8	C	40	O	0.05	150	.10 m	40	T					**2.5**	**1000 H**		
2N5256			**SPA**	0.8	C	40	O	0.05	150	.10 m	40	T					**2.5**	**1000 H**		
2N5257	THRU		THY	Table 6																
2N5261			THY	Table 6																
2N5262	2N6187		SNS	4.0	C	50	O	2.0	35	100 m				*30/60*		*.8*		*1.0 A*		

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	t_{on} ns Max	ΔV_{BE} mV Max	t_{off} ns Max	Gp dB Min	$V_{CE(sat)}$ Volts Max	NF dB Max @ $\frac{I_C}{I_B}$	& I_C	Unit	PACKAGE To-Case No. No.
2N5264	2N6189		SNG	87	C	180	O	10	30	1.0 A	50	T		*1500/4000*		*1.2*			*7.0 A*			3/
2N5265			FET	Table 9																		
★ 2N5270			FET	Table 9																		
★ 2N5271		2	SNS	0.6	A			5.0						*5.0/1.0*								39/79
D 2N5273	THRU		THY	Table 6																		
D 2N5275			THY	Table 6																		
D 2N5276			SNG	0.36	A	15	O	0.1	30	1.0 m	600	T		*20/86*		*.2*			*20 m*			18/
2N5277			FET	Table 9																		
2N5278			FET	Table 9																		
2N5279	2N3742		SNA	5.0	C	300	O	1.0	40	20 m	15	T	10			.5			*50 m*			5/
2N5280			SNA	15	C	300	O	1.0	40	20 m	15	T	10			.5			*50 m*			
2N5281			SPA	200	C	150	O	1.0	20	1.0 m	20	T	20			*2.0*			*10 m*			5/
2N5282			SPA	200	C	300	O	1.0	20	1.0 m	20	T	20			*2.0*			*10 m*			
2N5284	2N5346		SNA	50	C	80	O	5.0	30	2.5 A	60	T				.75			*2.5 A*			59/
2N5285	2N5347		SNA	50	C	80	O	5.0	70	2.5 A	70	T				*.75*			*2.5 A*			59/
2N5286	2N6188		SPA	50	C	100	O	5.0	30	2.5 A	60	T				*.75*			*2.5 A*			59/
2N5287			SPA	50	C	100	O	5.0	70	2.5 A	70	T				*.75*			*2.5 A*			59/
2N5288	2N5349		SNA	100	C	100	O	10	30	5.0 A	30	T				.9			*5.0 A*			
2N5289			SNA	100	C	100	O	10	70	5.0 A	40	T				.9			*5.0 A*			
2N5290			SPA	100	C	100	O	10	30	5.0 A	30	T				.9			*5.0 A*			
2N5291			SPA	100	C	100	O	10	70	5.0 A	40	T				.9			*5.0 A*			
D 2N5292			SPS	1.0	C	12	S	0.1	40	30 m	800	T		*15/35*		*.12*			*10 m*			18/
2N5293	2N4922		SNA	36	C	75	R	4.0	30	0.5 A	8.0	T				*2.0*			*3.6 A*			220AA/
2N5294	2N4922		SNA	36	C	75	R	4.0	30	0.5 A	8.0	T				*2.0*			*3.6 A*			220AB/
2N5295	2N5190		SNA	36	C	50	R	4.0	30	1.0 A	8.0	T				*2.0*			*3.6 A*			220AA/
2N5296	2N5190		SNA	36	C	50	R	4.0	30	1.0 A	8.0	T				*2.0*			*3.6 A*			220AB/
2N5297	2N4233		SNA	36	C	70	R	4.0	20	1.5 A	8.0	T				*2.0*			*3.6 A*			220AA/
2N5298	2N4233		SNA	36	C	70	R	4.0	20	1.5 A	8.0	T				*2.0*			*3.6 A*			220AB/
★ 2N5301		2	SNS	200	C	40	O	30	15	15 A	2.0	T		*100/300*		*.75*			*10 A*			/12
★ 2N5302	2N5303		SNS	200	C	60	O	30	15	15 A	2.0	T		*100/300*		*.75*			*10 A*			/12
★ 2N5303		2	SNS	200	C	80	O	20	15	10 A	2.0	T		*100/300*		*1.0*			*10 A*			/12
★ 2N5304		2	SNA	25	C	40	O	10	30	2.0 A	10	T	300			*.4*			*2.0 A*			61/9
2N5305			SNA	0.45	A	25	O	0.2	2K	2.0 m	60	T				*1.4*			*200 m*			98/
2N5306			SNA	0.4	A	25	O	0.2	7K	2.0 m	60	T				*1.4*			*200 m*			98/
2N5306A			SNA	0.4	A	25	O	0.3	7K	2.0 m	60	T				*1.4*			*200 m*			98/
2N5307			SNA	0.4	A	40	O	0.2	2K	2.0 m	60	T				*1.4*			*200 m*			98/
2N5308			SNA	0.4	A	40	O	0.2	7K	2.0 m	60	T				*1.4*			*200 m*			98/
2N5308A			SNA	0.4	A	40	O	0.3	7K	2.0 m	60	T				*1.4*			*200 m*			98/
2N5309			SNA	0.33	A	50	O	0.1	60	10 u						*.12*			*10 m*			98/
2N5310			SNA	0.33	A	50	O	0.1	100	10 u						*.12*			*10 m*			98/
2N5311			SNA	0.33	A	50	O	0.1	250	10 u						*.12*			*10 m*			98/
2N5312			SPG	50	C	80	O	10	30	10 A	30	T	500	*500/1250*		*1.5*			*10 A*			61/
2N5313			SNG	50	C	80	O	10	30	10 A	30	T	500	*500/1500*		*1.5*			*10 A*			61/
2N5314			SPG	50	C	100	O	10	30	10 A	30	T	500	*500/1250*		*1.5*			*10 A*			61/
2N5315			SNG	50	C	100	O	10	30	10 A	30	T	500	*500/1500*		*1.5*			*10 A*			61/
2N5316			SPG	50	C	80	O	10	30	5.0 A	30	T	500	*200/1200*		*.6*			*5.0 A*			61/
2N5317			SNG	50	C	80	O	10	30	5.0 A	30	T	500	*400/1600*		*.6*			*5.0 A*			61/
2N5318			SPG	50	C	100	O	10	30	5.0 A	30	T	500	*200/1200*		*.6*			*5.0 A*			61/
2N5319			SNG	50	C	100	O	10	30	5.0 A	30	T	500	*400/1600*		*.6*			*5.0 A*			61/
2N5320			SNS	10	C	75	O	2.0	30	500 m	50	T		*80/800*		*.5*			*500 m*			5/
2N5321			SNS	10	C	50	O	2.0	40	500 m	50	T		*80/800*		*.8*			*500 m*			5/
2N5322	2N6190		SPS	10	C	75	O	2.0	30	500 m	50	T		*100/1000*		*.7*			*500 m*			5/
2N5323	2N6190		SPS	10	C	50	O	2.0	40	500 m	50	T		*100/1000*		*1.2*			*500 m*			5/
★ 2N5324		2	GPS	56	C	150	O	10	20	5.0 A	0.1	T		*150/170*		*.5*			*10 A*			3/11
★ 2N5325		2	GPS	56	C	200	O	10	20	5.0 A	0.1	T		*150/170*		*.5*			*10 A*			3/11
2N5326	2N5347		SNS	20	C	80	O	5.0	50	1.0 A	80	T		*150/400*		*1.0*			*5.0 A*			59/
2N5327			SNS	5.0	C	80	O	10	100	1.0 A	100	T		*200/900*		*.3*			*3.0 A*			5/
2N5328			SNS	30	C	80	O	10	100	1.0 A	100	T		*200/900*		*.6*			*5.0 A*			59/
2N5329			SNG	65	C	90	O	20	40	10 A	80	T		*350/1100*		*1.8*			*20 A*			61/
2N5330	MJ7000		SNG	80	C	90	O	30	40	10 A	80	T		*350/1250*		*.6*			*10 A*			61/
2N5331	MJ7000		SNG	100	C	90	O	30	40	10 A	80	T		*350/1250*		*.6*			*10 A*			63/
2N5332			SPG	0.36	A	12	O	0.1	20	1.0 m	600	T		*20/86*		*.2*			*20 m*			46/
2N5333	2N3868		SPA	1.0	A	80	O	2.0	30	1.0 A	30	T				*1.0*			*2.0 A*			5/
★ 2N5334			SNG	6.0	C	60	O	3.0	30	1.0 A	40	T	75	*50/1050*		*.7*			*2.0 A*			39/79
★ 2N5335			SNG	6.0	C	80	O	3.0	30	1.0 A	40	T	75	*50/1050*		*.7*			*2.0 A*			39/79
★ 2N5336		2	SNS	6.0	C	80	O	5.0	30	2.0 A	30	T	250	*200/400*		*.7*			*2.0 A*			39/79
★ 2N5337		2	SNS	6.0	C	80	O	5.0	60	2.0 A	30	T	250	*200/400*		*.7*			*2.0 A*			39/79
★ 2N5338		2	SNS	6.0	C	100	O	5.0	30	2.0 A	30	T	250	*200/400*		*.7*			*2.0 A*			39/79
★ 2N5339		2	SNS	6.0	C	100	O	5.0	60	2.0 A	30	T	250	*200/400*		*.7*			*2.0 A*			39/79
★ 2N5344		2	SPS	40	C	250	O	1.0	25	500 m	60	T	200	*100/700*		*3.0*			*1.0 A*			66/80

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF dB Max	@ f Unit	PACKAGE To-Case No. No.
														t_{on} ns Max	t_{off} ns Max	$V_{CE(sat)}$ Volts Max	@ I_C/I_B	& I_C	
★ 2N5345		2	SPS	40 C		300	0	1.0	25	500 m	60	T	200	*100/700*		*3.0*		*1.0 A*	66/80
★ 2N5346		2	SNA	60 C		80	0	7.0	30	2.0 A	30	T	250			*.7*		*2.0 A*	59/160
★ 2N5347		2	SNA	60 C		80	0	7.0	30	2.0 A	30	T	250			*.7*		*2.0 A*	59/160
★ 2N5348		2	SNA	60 C		100	0	7.0	60	2.0 A	30	T	250			*.7*		*2.0 A*	59/160
★ 2N5349		2	SNA	60 C		100	0	7.0	60	2.0 A	30	T	250			*.7*		*2.0 A*	59/160
2N5350			SNG	350 C		100	0	90	10	70 A	10	T			*2K/12K*	*5.0*		*90 A*	
2N5351			SNG	350 C		150	0	90	10	70 A	10	T			*2K/12K*	*5.0*		*90 A*	
2N5354			SPA	0.36 A		25	0	0.5	40	50 m						*.25*		*50 m*	98/
2N5355			SPA	0.36 A		25	0	0.5	100	50 m						*.25*		*50 m*	98/
2N5356			SPA	0.36 A		25	0	0.5	250	50 m						*.25*		*50 m*	98/
2N5357	2N5345		SPS	30 C		300	0	3.0	25	500 m	50	T	60	*150/700*		*.3*		*100 m*	37/39
2N5358	THRU		FET	Table 9															
2N5364			FET	Table 9															
2N5366			SPA	0.36 A		40	0	0.5	100	50 m						*.25*		*50 m*	98/
2N5367			SPA	0.36 A		40	0	0.5	250	50 m						*.25*		*50 m*	98/
2N5368			SNG	0.36 A		30	0	0.5	60	150 m	250	T			*40/350*	*.3*		*150 m*	
2N5369			SNG	0.36 A		30	0	0.5	100	150 m	250	T			*40/350*	*.3*		*150 m*	
2N5370			SNG	0.36 A		30	0	0.5	200	150 m	250	T			*40/400*	*.3*		*150 m*	
2N5371			SNG	0.36 A		30	0	0.5	60	150 m	250	T			*40/400*	*.3*		*150 m*	
2N5372			SPG	0.36 A		30	0	0.5	40	150 m	150	T			*50/150*	*.3*		*150 m*	
2N5373			SPG	0.36 A		30	0	0.5	100	150 m	150	T			*50/150*	*.3*		*150 m*	
2N5374			SPG	0.36 A		30	0	0.5	200	150 m	150	T			*50/175*	*.3*		*150 m*	
2N5375			SPG	0.36 A		30	0	0.5	40	150 m	150	T			*50/175*	*.3*		*150 m*	
2N5376			SNE	0.36 A		30	0	0.5	100	.01 m	300	T					**2.0**		
2N5377			SNE	0.36 A		30	0	0.5	40	.01 m	300	T					**3.0**		
2N5378			SPE	0.36 A		30	0	0.5	100	.01 m	200	T					**2.0**	**AUD**	
2N5379			SPE	0.36 A		30	0	0.5	40	.01 m	200	T					**3.0**	**AUD**	
2N5380			SPE	0.36 A		40	0		50	10 m	250	T			*70/225*		**6.0**		
2N5381			SPE	0.36 A		40	0		100	10 m	300	T			*70/250*		**5.0**		
2N5382			SPE	0.36 A		40	0		150	10 m	200	T			*70/260*		**5.0**		
2N5383			SNE	0.36 A		40	0		100	10 m	250	T			*70/300*		**4.0**		
2N5384	2N6186		SPA	2.0 A		80	0	5.0	20	2.0 A	30	T				*1.4*		*5.0 A*	111/
2N5385	2N6186		SPA	2.0 A		80	0	5.0	20	2.0 A	30	T				*1.4*		*5.0 A*	111/
2N5386	2N3490		SPA	3.5 A		80	0	12	20	6.0 A	30	T				*1.4*		*12 A*	61/9
2N5387			SNA	3.5 A		200	0	7.5	25	2.0 A	15	T				*2.2*		*7.0 A*	61/9
2N5388			SNA	3.5 A		250	0	7.5	25	2.0 A	15	T				*2.2*		*7.0 A*	61/9
2N5390			SNA	1.0 C		80	0	2.0	2K	2.0 A	40	T	100			*2.5*		*5.0 A*	33/
2N5391			FET	Table 9															
2N5399			SNG	0.36 A		15	0	0.1	30	1.0 m	600	T			*20/86*	*.2*		*20 m*	46/26
★ 2N5400		2	SPE	0.31 A		120	0	0.6	40	10 m	100	T	6.0				**8.0**		92/29
★ 2N5401		2	SPE	0.31 A		150	0	0.6	60	10 m	100	T	6.0				**8.0**		92/29
2N5404	2N6190		SPG	1.0 A		80	0	5.0	20	2.0 A	40	T	150	*500/950*		*.6*		*2.0 A*	5/31
2N5405	2N6192		SPG	1.0 A		100	0	5.0	20	2.0 A	40	T	150	*500/950*		*.6*		*2.0 A*	5/31
2N5406	2N6191		SPG	1.0 A		80	0	5.0	40	2.0 A	40	T	150	*500/1300*		*.6*		*2.0 A*	5/31
2N5407	2N6193		SPG	1.0 A		100	0	5.0	40	2.0 A	40	T	150	*500/1300*		*.6*		*2.0 A*	5/31
2N5408	2N6186		SPS	30 C		80	0	5.0	20	2.0 A	40	T	150	*500/950*		*.6*		*2.0 A*	111/
2N5409	2N6188		SPS	30 C		100	0	5.0	20	2.0 A	40	T	150	*500/950*		*.6*		*2.0 A*	111/
2N5410	2N6187		SPG	30 C		80	0	5.0	40	2.0 A	40	T	150	*500/1300*		*.6*		*2.0 A*	111/
2N5411	2N6189		SPG	30 C		100	0	5.0	40	2.0 A	40	T	150	*500/1300*		*.6*		*2.0 A*	111/
2N5412			SNS	100 C		60	0	15	10	2.0 A	60	T		*225/600*		*1.0*		*10 A*	61/9
2N5413			SNG	1.0 A		40	0	2.0	25	2.0 A	250	T		*40/60*		*.25*		*150 m*	39/79
2N5414			SNG	1.0 A		50	0	2.0	25	2.0 A	250	T		*40/70*		*.25*		*150 m*	39/79
2N5415			SPA	10 C		200	0	1.0	30	50 m	15	T	15						5/31
2N5416			SPA	10 C		300	0	1.0	30	50 m	15	T	15						5/31
D 2N5417			SNG	0.5 A		35	0	0.5	80	150 m	250	T		*26/210*		*.55*		*150 m*	39/79
2N5418			SNA	0.36 A		25	0	0.5	40	50 m						*.25*		*50 m*	98/
2N5419			SNA	0.36 A		25	0	0.5	100	50 m						*.25*		*50 m*	98/
2N5420			SNA	0.36 A		25	0	0.5	250	50 m						*.25*		*50 m*	98/
2N5421			SNA	3.0 C		18	0	0.5	10	0.1 A	300	T	5.0			*.5*		*.2 A*	39/79
2N5422			SNA	5.0 C		18	0	1.0	10	0.5 A	300	T	15			*.5*		*.5 A*	39/79
2N5423			SNA	12 C		18	0	2.0	20	1.0 A	300	T	25			*.5*		*1.0 A*	60/36
2N5424			SNA	20 C		18	0	4.0	20	2.0 A	250	T	45			*.5*		*2.0 A*	60/36
2N5424A			SNA	20 C		18	0	4.0	20	2.0 A	250	T	45			*.5*		*2.0 A*	60/36
D 2N5425			SNG	20 C		60	0	5.0	500	5.0 A	50	T		*300/2000*		*2.5*		*5.0 A*	
D 2N5426			SNG	20 C		60	0	5.0	1000	5.0 A	50	T		*300/2000*		*2.2*		*5.0 A*	
★ 2N5427			SNS	40 C		80	0	7.0	30	2.0 A	30	T	250	*200/400*		*.7*		*2.0 A*	66/80
★ 2N5428		2	SNS	40 C		80	0	7.0	60	2.0 A	30	T	250	*200/400*		*.7*		*2.0 A*	66/80
★ 2N5429		2	SNS	40 C		100	0	7.0	30	2.0 A	30	T	250	*200/400*		*.7*		*2.0 A*	66/80
★ 2N5430		2	SNS	40 C		100	0	7.0	60	2.0 A	30	T	250	*200/400*		*.7*		*2.0 A*	66/80
2N5431			UJT	Table 8															

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C/I_B	& I_C	Unit	PACKAGE To-Case No. No.
★ 2N5433	THRU		FET	Table 9																
★ 2N5434			FET	Table 9																
★ 2N5435		2	GPG	120	C	60	O	60	20	25 A				1200/2200		.75		60	A	3/3
★ 2N5436		2	GPG	120	C	90	O	60	20	25 A				1200/2200		.75		60	A	3/3
★ 2N5437		2	GPG	120	C	120	O	60	20	25 A				1200/2200		.75		60	A	3/3
★ 2N5438			GPG	120	C	60	O	60	40	25 A				1200/2200		.50		60	A	3/3
★ 2N5439		2	GPG	120	C	90	O	60	40	25 A				1200/2200		.50		60	A	3/3
★ 2N5440		2	GPG	120	C	120	O	60	40	25 A				1200/2200		.50		60	A	3/3
2N5441	THRU		THY	Table 6																
2N5446			THY	Table 6																
2N5447			SNA	0.36	A	25	O	0.2	60	50 m	100	T				.25		50	m	
2N5448			SNA	0.36	A	30	O	0.2	30	50 m	100	T				.25		50	m	
2N5450			SNA	0.36	A	30	O	0.8	50	50 m	100	T				.8		100	m	
2N5451			SNA	0.36	A	20	O	0.8	30	50 m	100	T				1.0		100	m	
2N5452	THRU		FET	Table 9																
2N5454			FET	Table 9																
2N5456			SPS	0.34	A	25	O	0.3	30	30 m	450	T		20/30		.55		300	m	52/
2N5457	THRU		FET	Table 9																
2N5465			FET	Table 9																
2N5466	MJ431		SNA	40		400	O	3.0	15	3.0 A	2.5	T	200			.5		3.0	A	3/
2N5467	MJ431		SNA	40		400	O	3.0	15	3.0 A	2.5	T	200			.5		3.0	A	3/
2N5468	MJ431		SNA	40		400	O	3.0	15	3.0 A	2.5	T	200			.5		3.0	A	66/
2N5469	MJ431		SNA	40		400	O	3.0	15	3.0 A	2.5	T	200			.5		3.0	A	66/
2N5470			SNH	3.5	C	55	R	0.2										2000	M	
2N5471	THRU		FET	Table 9																
★ 2N5476			FET	Table 9																
★ 2N5477			SNS	60	C	80	O	7.0	30	2.0 A	30	T	250	200/400		.7		2.0	A	59/160
★ 2N5478			SNS	60	C	80	O	7.0	60	2.0 A	30	T	250	200/400		.7		2.0	A	59/160
★ 2N5479			SNS	60	C	100	O	7.0	30	2.0 A	30	T	250	200/400		.7		2.0	A	59/160
★ 2N5480			SNS	60	C	100	O	7.0	60	2.0 A	30	T	250	200/400		.7		2.0	A	59/160
2N5481			SNP	5.0	C	30	O	0.2	20	50 m						6.0		2000	M	
2N5484	THRU		FET	Table 9																
2N5486			FET	Table 9																
2N5487			SNS	15	C	80	O	5.0	100	1.0 A	40	T	75	125/450		.25		1.0	A	
2N5488			SNS	15	C	100	O	5.0	40	1.0 A	40	T	75	125/550		.25		1.0	A	
2N5489	MJ7201		SNA	300	C	100	O	40	15	40 A	0.5	T				1.5		40	A	114/
2N5490	2N5873		SNA	50	C	50	R	7.0	20	2.0 A	0.8	T				2.0		6.5	A	
2N5491	2N5873		SNA	50	C	50	R	7.0	20	2.0 A	0.8	T				2.0		6.5	A	
2N5492	2N5873		SNA	50	C	65	R	7.0	20	2.0 A	0.8	T				2.0		6.5	A	
2N5493	2N5873		SNA	50	C	65	R	7.0	20	2.0 A	0.8	T				2.0		6.5	A	
2N5494	2N5877		SNA	50	C	50	R	7.0	20	2.0 A	0.8	T				2.0		6.5	A	
2N5495	2N5877		SNA	50	C	50	R	7.0	20	2.0 A	0.8	T				2.0		6.5	A	
2N5496	2N5878		SNA	50	C	80	R	7.0	20	2.0 A	0.8	T				2.0		7.0	A	
2N5497	2N5878		SNA	50	C	80	R	7.0	20	2.0 A	0.8	T				2.0		7.0	A	
2N5498	2N5631		SNA	200	C	130	O	15	10	15 A	1.0	T				1.5		15	A	
D 2N5505			FET	Table 9																
2N5514	THRU		FET	Table 9																
2N5524			FET	Table 9																
2N5525			SNA	0.36	A	30	O	0.2	5000	10 m	200	T	10			1.0		50	m	
2N5526			SNA	0.36	A	30	O	0.2	1000	10 m	200	T	10			1.0		50	m	
2N5527			SNA	5.0	C	40	O	5.0	40	3.0 A	200	T	75			1.2		3.0	A	
2N5528			SNA	35	C	40	O	10	40	3.0 A	200	T	75			1.2		3.0	A	59/
2N5529			SNA	35	C	40	O	10	40	3.0 A	200	T	75			1.2		3.0	A	61/
2N5530			SNA	35	C	40	O	10	40	3.0 A	200	T	75			1.2		3.0	A	61/
2N5531			SNA	5.0	C	75	O	5.0	30	3.0 A	200	T	75			1.2		3.0	A	
2N5532			SNA	35	C	75	O	10	30	3.0 A	200	T	75			1.2		3.0	A	59/
2N5533			SNA	35	C	75	O	10	30	3.0 A	200	T	75			1.2		3.0	A	61/
2N5534			SNA	35	C	75	O	10	30	3.0 A	200	T	75			1.2		3.0	A	61/
2N5535			SNS	50	C	50	O	20	30	10 A	150	T	100	225/600		1.2		5.0	A	
2N5536			SNS	50	C	50	O	20	30	10 A	150	T	100	225/600		1.2		5.0	A	
2N5537			SNS	50	C	75	O	20	20	10 A	150	T	100	225/600		1.2		5.0	A	61/
2N5538			SNS	50	C	75	O	20	20	10 A	150	T	100	225/600		1.2		5.0	A	61/
2N5539	MJ7000		SNG	100		130	O	20	25	10 A	20	T		500/2000		3.0		20	A	63/
2N5540			SNG	50		300	O	10	20	5.0 A	20	T		1500/3000		2.5		10	A	61/
2N5541			SNG	5.0		130	O	5.0	30	5.0 A	20	T		500/2000		2.5		10	A	5/
2N5543	THRU		FET	Table 9																
★ 2N5549			FET	Table 9																
★ 2N5550		2	SNE	0.35		140	O	0.6	60	10 m	100	T	6.0				10			92/29
★ 2N5551		2	SNE	0.35		160	O	0.6	80	10 m	100	T	6.0				10			92/29
2N5552			SNS	15	C	80	O	10	50	5.0 A	30	T	150	100/700		.5		5.0	A	

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / @ I_C/I_B	Unit	& I_C	PACKAGE To- Case No. No.
2N5555	THRU		FET	Table 9																
2N5558			FET	Table 9																
2N5559	2N5633		SNS	100 C		120	X	10	20	4.0 A	0.8	T		600/800		.75			4.0 A	3/
2N5561	THRU		FET	Table 9																
★ 2N5566			FET	Table 9																
2N5567	THRU		THY	Table 6																
2N5574			THY	Table 6																
2N5575			SNS	150 C		70	X	80	10	60 A	0.4	T		150/150						
D 2N5576			SNS	150 C		70	X	80	10	60 A	0.4	T		150/150						
D 2N5577			SNS	150 C		70	X	80	10	60 A	0.4	T		150/150						
2N5578			SNS	150 C		90	X	60	10	40 A	0.4	T		100/100						
D 2N5579			SNS	150 C		90	X	60	10	40 A	0.4	T		100/100						
D 2N5580			SNS	150 C		90	X	60	10	40 A	0.4	T		100/100						
★ 2N5581		1	SNS	2.0 C		40	O	0.8	40	150 m	250	T	8.0	35/285		.3			150 m	46/26
★ 2N5582		1	SNS	2.0 C		40	O	0.8	100	150 m	300	T	8.0	35/285		.3			150 m	46/26
★ 2N5583		2	SNA	5.0 C		30	O	0.5	25	100 m	1000	T	5.0			.8	3*		200 M	72/20
2N5584			SNG	100 C		180	O	30	40	10 A	70	T		350/1250		1.8			20 A	63/188
2N5587			SNA	300 C		120	O	80	10	80 A	0.5	T								114/
2N5588			SNA	300 C		160	O	80	10	80 A	0.5	T								114/
★ 2N5589		2	SNP	15 C		36	S	0.6	5.0	100 m	200	T	30	3.0/		8.2			175 M	/144
★ 2N5590		2	SNP	30 C		36	S	2.0	5.0	250 m	200	T	70	10/		5.2			175 M	/145
★ 2N5591		2	SNP	70 C		36	S	4.0	5.0	200 m	200	T	120	25/					175 M	/145
2N5592	THRU		FET	Table 9																
2N5594			FET	Table 9																
2N5595			SNH	30 C		30	O	1.25	20	50 m	1500	T	8.0			6.0			1000 M	
2N5597			SPA	20 C		60	O	2.0	70	1.0 A	60	T				.46			1.0 A	66/
2N5598	2N5428		SNA	20 C		60	O	2.0	70	1.0 A	60	T				.46			1.0 A	66/
2N5599			SPA	20 C		80	O	2.0	30	1.0 A	50	T				.46			1.0 A	66/
2N5600	2N5427		SNA	20 C		80	O	2.0	30	1.0 A	50	T				.46			1.0 A	66/
2N5601	2N5344		SPA	20 C		80	O	2.0	70	1.0 A	60	T				.46			1.0 A	66/
2N5602	2N5428		SNA	20 C		80	O	2.0	70	1.0 A	60	T				.46			1.0 A	66/
2N5603	2N5344		SPA	20 C		100	O	2.0	30	1.0 A	50	T				.46			1.0 A	66/
2N5604	2N5428		SNA	20 C		100	O	2.0	30	1.0 A	50	T				.46			1.0 A	66/
2N5605	2N5428		SPA	25 C		60	O	5.0	70	2.5 A	70	T				.75			2.5 A	66/
2N5606	2N5428		SNA	25 C		60	O	5.0	70	2.5 A	70	T				.75			2.5 A	66/
2N5607			SPA	25 C		80	O	5.0	30	2.5 A	60	T				.75			2.5 A	66/
2N5608	2N5477		SNA	25 C		80	O	5.0	30	2.5 A	60	T				.75			2.5 A	66/
2N5609			SPA	25 C		80	O	5.0	70	2.5 A	70	T				.75			2.5 A	66/
2N5610	2N5428		SNA	25 C		80	O	5.0	70	2.5 A	70	T				.75			2.5 A	66/
2N5611			SPA	25 C		100	O	5.0	30	2.5 A	60	T				1.4			2.5 A	66/
2N5612	2N5429		SNA	25 C		100	O	5.0	30	2.5 A	60	T				.75			2.5 A	66/
2N5613			SPA	50 C		60	O	5.0	70	2.5 A	70	T				.75			2.5 A	3/
2N5614			SNA	50 C		60	O	5.0	70	2.5 A	70	T				.75			2.5 A	3/
2N5615	2N5876		SPA	50 C		80	O	5.0	30	2.5 A	60	T				.75			2.5 A	3/
2N5616	2N5878		SNA	50 C		80	O	5.0	30	2.5 A	60	T				.75			2.5 A	3/
2N5617			SPA	50 C		80	O	5.0	70	2.5 A	70	T				.75			2.5 A	3/
2N5618			SNA	50 C		80	O	5.0	70	2.5 A	70	T				.75			2.5 A	3/
2N5619	2N6229		SPA	50 C		100	O	5.0	30	2.5 A	60	T				.75			2.5 A	3/
2N5620	2N5632		SNA	50 C		100	O	5.0	30	2.5 A	60	T				.75			2.5 A	3/
2N5621			SPA	100 C		60	O	10	70	5.0 A	40	T				.9			5.0 A	3/
2N5622			SNA	100 C		60	O	10	70	5.0 A	40	T				.9			5.0 A	3/
2N5623	2N5880		SPA	100 C		80	O	10	30	5.0 A	30	T				.9			5.0 A	3/
2N5624	2N5882		SNA	100 C		80	O	10	30	5.0 A	30	T				.9			5.0 A	3/
2N5625			SPA	100 C		80	O	10	70	5.0 A	40	T				.9			5.0 A	3/
2N5627	2N6229		SPA	100 C		100	O	10	30	5.0 A	30	T				.9			5.0 A	3/
2N5628	2N5632		SNA	100 C		100	O	10	30	5.0 A	30	T				.9			5.0 A	3/
★ 2N5629		2	SNA	200 C		100	O	16	25	8.0 A	1.0	T	500			2.0			16 A	3/11
★ 2N5630		2	SNA	200 C		120	O	16	20	8.0 A	1.0	T	500			2.0			16 A	3/11
★ 2N5631		2	SNA	200 C		140	O	16	15	8.0 A	1.0	T	500			2.0			16 A	3/11
★ 2N5632		2	SNA	150 C		100	O	10	25	5.0 A	1.0	T	300			2.0			15 A	3/11
★ 2N5633		2	SNA	150 C		120	O	10	20	5.0 A	1.0	T	300			2.0			16 A	3/11
★ 2N5634		2	SNA	150 C		140	O	10	15	5.0 A	1.0	T	300			2.0			16 A	3/11
★ 2N5635			SNP	7.5 C		60	S	1.0	5.0	100 m	500	T	10	2.5/		6.2			400 M	/144
★ 2N5636		2	SNP	15 C		60	S	1.5	5.0	200 m	450	T	20	7.5/		5.7			400 M	/144
★ 2N5637		2	SNP	30 C		60	S	3.0	5.0	500 m	400	T	30	20/					400 M	/145
2N5638	THRU		FET	Table 9																
★ 2N5640			FET	Table 9																
★ 2N5641		2	SNP	15 C		65	S	1.0	5.0	100 m	300	T	15	7.0/		8.4			175 M	/144
★ 2N5642		2	SNP	30 C		65	S	3.0	5.0	200 m	250	T	35	20/		8.2			175 M	/145
★ 2N5643			SNP	60 C		65	S	5.0	5.0	500 m			65	40/		7.6			175 M	/145

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min	NF dB Max @ $V_{CE(sat)}$ Volts @ I_C/I_B	f & I_C	Unit	PACKAGE To-Case No.
★ 2N5644		2	SNP	3.5	C	36	S	0.25	15	100 m	400	T	8.0	1.0/		7.0		470	M	/145
★ 2N5645		2	SNH	12	C	18	O	1.0	15	500 m	400	T	20			6.0		470	M	/145
★ 2N5646		2	SNH	30	C	18	O	2.0	15	1.0 A	400	T	40					470	M	/145
2N5647	THRU		FET	Table 9																
2N5649			FET	Table 9																
2N5651			SNF	0.15	A	15	O	0.03	30	3.0 m	2000	T				20	2.0	500	M	72/
2N5652			SNF	0.15	A	15	O	0.03	30	3.0 m	2000	T				20	2.5	500	M	72/
★ 2N5653			FET	Table 9																
★ 2N5654			FET	Table 9																
★ 2N5655	2N3739	2	SNA	20	C	250	O	0.5	30	100 m	10	T	25			1.0		100 m		/77
★ 2N5656	2N3739	2	SNA	20	C	300	O	0.5	30	100 m	10	T	25			1.0		100 m		/77
★ 2N5657	2N3739		SNA	20	C	350	O	0.5	30	100 m	10	T	25			1.0		100 m		/77
2N5658			SNS	30	C	80	O	10	50	5.0 A	30	T	150	1500/800		1.0		1.0 A		59/160
2N5659			SNS	30	C	80	O	10	50	5.0 A	30	T	150	1500/800		1.0		1.0 A		111/
2N5660	2N6233		SNS	20	C	200	O	1.0	40	500 m	20	T	60	250/850		.4		1.0 A		66/
2N5661	2N6234		SNG	20	C	300	O	1.0	40	500 m	20	T	60	250/1200		.4		1.0 A		66/
2N5662			SNS	15	C	200	O	1.0	40	500 m	20	T	60	250/850		.4		1.0 A		5/
2N5663			SNG	15	C	300	O	1.0	40	500 m	20	T	60	250/1200		.4		1.0 A		5/
2N5664	2N6233		SNG	30	C	200	O	3.0	40	1.0 A	20	T	125	250/1500		.4		3.0 A		66/
2N5665	2N6234		SNG	30	C	300	O	3.0	40	1.0 A	20	T	125	250/2000		.4		3.0 A		66/
2N5666			SNG	15	C	200	O	3.0	40	1.0 A	20	T	125	250/1500		.4		3.0 A		5/
2N5667			SNG	15	C	300	O	3.0	40	1.0 A	20	T	125	250/2000		.4		3.0 A		5/
2N5668	THRU		FET	Table 9																
2N5670			FET	Table 9																
2N5672			SNG	80	C	150	X	30	20	15 A	50	T		500/2000						3/
2N5675			SPA	1.0	A	100	O	2.0	50	0.5 A	50	T	80			2.0		2.0 A		5/
2N5676			SPA	2.0	A	100	O	2.0	50	0.5 A	50	T	80			2.0		2.0 A		66/
2N5677			SPG	50	C	100	O	10	30	5.0 A	20	T		500/2000		2.5		10 A		61/
2N5678			SPG	100	C	100	O	20	25	10 A	20	T		500/2000		3.0		20 A		63/
★ 2N5679		2	SPA	10	C	100	O	1.0	40	250 m	30	T	50			.6		250 m		5/31
★ 2N5680		2	SPA	10	C	120	O	1.0	40	250 m	30	T	50			.6		250 m		5/31
★ 2N5681		2	SNA	10	C	100	O	1.0	40	250 m	30	T	50			.6		250 m		5/31
★ 2N5682		2	SNA	10	C	120	O	1.0	40	250 m	30	T	50			.6		250 m		5/31
★ 2N5683			SPA	300	C	60	O	50	15	25 A	2.0	T	2000			5.0		50 A		/197
★ 2N5684		2	SPA	300	C	80	O	50	15	25 A	2.0	T	2000			5.0		50 A		/197
★ 2N5685		2	SNA	300	C	60	O	50	15	25 A	2.0	T	1200			5.0		50 A		/197
★ 2N5686		2	SNA	300	C	80	O	50	15	25 A	2.0	T	1200			5.0		50 A		/197
2N5687			SNH	5.0	C	20	O	0.5	15	50 m			15			12		50	M	39/
2N5688			SNH	10	C	20	O	0.5	15	50 m			15			13		50	M	117/
2N5689			SNH	25	C	40	O	3.0	15	100 m			40			10		50	M	117/
2N5690			SNH	50	C	30	O	5.0	10	100 m			50			10		50	M	128/
2N5691			SNH	88	C	30	O	8.0	10	100 m			160			8.0		50	M	
★ 2N5692		2	GPG	120	C	30	O	40	20	25 A	200	T		200/2300		.75		60 A		3/
★ 2N5693		2	GPG	120	C	60	O	40	20	25 A	200	T		200/2300		.75		60 A		3/
★ 2N5694			GPG	120	C	80	O	40	20	25 A	200	T		200/2300						3/
★ 2N5695		2	GPG	120	C	100	O	40	20	25 A	200	T		200/2300		.75		60 A		3/
★ 2N5696			GPG	120	C	120	O	40	20	25 A	200	T		200/2300		.75		60 A		3/
2N5697			SNH	3.5	C	18	O	0.5	30	40 m			10			7.0		470	M	39/79
2N5698			SNH	5.0	C	18	O	0.5	30	40 m			20			6.0		470	M	131/
2N5699			SNH	10	C	18	O	1.0	15	50 m			30			5.5		470	M	129/
2N5700			SNH	35	C	18	O	3.0	30	50 m			30					470	M	129/
2N5701			SNH	35	C	18	O	3.0	30	50 m			40					470	M	129/
2N5702			SNH	0.88	C	18	O	0.5	15	50 m			20			6.0		175	M	39/
2N5703			SNH	10	C	18	O	0.75	15	50 m			15			8.0		175	M	117/
2N5704			SNH	25	C	18	O	2.0	15	50 m			35					175	M	117/
2N5705			SNH	44	C	18	O	4.0	15	100 m			55					175	M	128/
2N5706			SNH	80	C	18	O	7.0	15	100 m			100					175	M	
2N5707			SNH	70	S	50	O	4.0	5.0	100 m	50	T	60			14		28	M	128/
2N5708			SNH	100	S	50	O	6.0	5.0	100 m	50	T	90			13		28	M	128/
2N5709			SNA	140	S	50	O	12	5.0	200 m	50	T	50E							
2N5710			SNH	3.5	C	20	O	0.5	20	10 m			6.0			11		150	M	39/
2N5711			SNH	10	C	36	O	0.75	20	50 m			6.0			10		150	M	117/
2N5712			SNH	25	C	40	O	2.0	10	100 m			40			6.0		150	M	117/
2N5713			SNH	45	C	40	O	5.0	10	10 m			80					150	M	128/
2N5714			SNH	70	C	40	O	8.0	10	10 m			160					150	M	
2N5715			SNH	6.0	S	3	O	0.2	20	50 m	3500	T				9.0		2000	M	
2N5716			FET	Table 9																
2N5718			FET	Table 9																
2N5719	THRU		THY	Table 6																
2N5728			THY	Table 6																

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	@ I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF dB Max	@ f & I_C	Unit	PACKAGE To-Case No.
															t_{on} ns Max	t_{off} ns Max	$V_{CE(sat)}$ Volts Max	@ I_C/I_B			
2N5729	2N5336		SNS	10	C	80	O	5.0	30	2.0 A		30	T	150	*200*	*/800*	*1.5*		*5.0 A*		5/
2N5730	2N5346		SNS	45	C	80	O	10	30	2.0 A		30	T	150	*200*	*/800*	*1.2*		*5.0 A*		59/
2N5731	2N5347		SNS	75	C	80	O	20	30	5.0 A		30	T	350	*300*	*/900*	*1.5*		*10 A*		61/
2N5732			SNS	75	C	80	O	20	30	5.0 A		30	T	350	*300*	*/900*	*1.2*		*10 A*		3/
2N5733	MJ7000		SNS	150	C	80	O	30	30	10 A		30	T	750	*700*	*/400*	*1.2*		*20 A*		63/
2N5734	2N5886		SNS	150	C	80	O	30	30	10 A		30	T	750	*700*	*/400*	*1.2*		*20 A*		3/
D 2N5735			SNG	0.36	A	30	O	0.3	40	150 m		200	T		*60*	*/325*	*.4*		*150 m*		122/
D 2N5736			SNG	0.36	A	30	O	0.3	100	150 m		200	T		*60*	*/325*	*.4*		*150 m*		122/
2N5737	2N5875		SPA	50	C	60	O	10	20	5.0 A		10	T	250			*.5*		*5.0 A*		3/
2N5738	2N6229		SPA	50	C	100	O	10	20	5.0 A		10	T	250			*.5*		*5.0 A*		3/
2N5739	2N5875		SPA	20	C	60	O	10	20	5.0 A		10	T	250			*.5*		*5.0 A*		66/
2N5740			SPA	20	C	100	O	10	20	5.0 A		10	T	250			*.5*		*5.0 A*		66/
2N5741	2N5883		SPA	65	C	60	O	20	20	10 A		10	T	500			*1.5*		*10 A*		3/
2N5742	2N6029		SPA	65	C	100	O	20	20	10 A		10	T	500			*1.5*		*10 A*		3/
2N5743	2N5883		SPA	25	C	60	O	20	20	10 A		10	T	500			*1.5*		*10 A*		66/
2N5744	2N5884		SPA	25	C	100	O	20	20	10 A		10	T	500			*1.5*		*10 A*		66/
2N5745			SPS	200	C	80	O	20	15	10 A		2.0	T		*100*	*/300*	*1.0*		*10 A*		
★ 2N5754	THRU		THY	Table 6																	
★ 2N5757			THY	Table 6																	
★ 2N5758		2	SNA	150	C	100	O	6.0	25	3.0 A		1.0	T	300			*1.0*		*3.0 A*		3/11
★ 2N5759		2	SNA	150	C	120	O	6.0	20	3.0 A		1.0	T	300			*1.0*		*3.0 A*		3/11
★ 2N5760		2	SNA	150	C	140	O	6.0	15	3.0 A		1.0	T	300			*1.0*		*3.0 A*		3/11
2N5761			SNF	0.25	A	15	O	0.03	30	10 m		3000	T					**8.5**	**4000 M**		
2N5762			SNF	0.3	A	15	O	0.04	30	15 m		2500	T				**7.0**	**5.0**	**2000 M**		
2N5763	2N2907A		SPG	0.4	A	60	O	0.6	70	10 m		200	T		*50*	*/200*	*.4*		*150 m*		18/22
2N5764			SNH	10	S	25	O	0.75	20	.10 A				6.0			**6.0**		**1000 M**		
2N5765			SNH	19	S	25	O	1.5	20	.10 A				12			**6.0**		**1000 M**		
2N5766			SNH	5.0	S	25	O	0.2	20	.05 A							**8.0**		**2000 M**		
2N5767			SNH	10	S	25	O	0.35	20	.10 A				5.0			**8.0**		**2000 M**		
2N5768			SNH	20	S	25	O	0.7	20	.10 A				10			**6.0**		**2000 M**		
2N5769			SNS	.625	A	15	O	0.2	40	10 m		500	T	4.0	*12*	*/18*	*0.5*	*10*	*100 m*		92/
2N5770			SNO	0.7	A	30	B		50	8.0 m		900	T	1.1	**0.03**	*/*			**500 M**		92/
2N5771			SPS	.625	A	15	O	0.05	50	10 m		850	T	3.0	*15*	*/20*	*0.6*	*10*	*50 m*		92/
2N5772			SNS	.625	A	15		0.2	30	30 m		350	T	5.0	*18*	*/28*	*0.5*	*10*	*300 m*		92/
2N5773			SNH	5.0	C	35	O	0.5	20	.05 A				4.5			**11**		**400 M**		
2N5774			SNH	18	C	35	O	1.5	20	0.1 A				14			**9.0**		**400 M**		129/
2N5775			SNH	40	C	35	O	3.5	10	0.1 A				26			**6.0**		**400 M**		
2N5776			SNH	70	C	35	O	6.0	10	0.2 A				50					**400 M**		
2N5777	THRU		OPT	Table 10																	
★ 2N5780			OPT	Table 10																	
2N5781	2N3720		SPA	10	C	80	R	3.5	4.0	3.2 A		8.0	T				*2.0*		*3.2 A*		5/
2N5782	2N3720		SPA	10	C	65	R	3.5	4.0	3.2 A		8.0	T				*2.0*		*3.2 A*		5/
2N5783	2N3867		SPA	10	C	45	R	3.5	4.0	3.2 A		8.0	T				*2.0*		*3.2 A*		5/
2N5784	2N5335		SNA	10	C	80	R	3.5	4.0	3.2 A		1.0	T				*2.0*		*3.2 A*		5/
2N5785	2N5334		SNA	10	C	65	R	3.5	4.0	3.2 A		1.0	T				*2.0*		*3.2 A*		5/
2N5786	2N5336		SNA	10	C	45	R	3.5	4.0	3.2 A		1.0	T				*2.0*		*3.2 A*		5/
★ 2N5787	THRU		THY	Table 6																	
★ 2N5790			THY	Table 6																	
★ 2N5793		2	SNG	0.5	A	40	O	0.6	40	150 m		200	T		*45*	*/310*	*.9*		*300 m*		/654
★ 2N5794		2	SNG	0.5	A	40	O	0.6	100	150 m		200	T		*45*	*/310*	*.9*		*300 m*		/654
★ 2N5795		2	SNG	0.5	A	60	O	0.6	40	150 m		200	T		*47*	*/140*	*1.6*		*500 m*		/654
★ 2N5796		2	SNG	0.5	A	60	O	0.6	100	150 m		200	T		*47*	*/140*	*1.6*		*500 m*		/654
D 2N5797	THRU		FET	Table 9																	
2N5803			FET	Table 9																	
2N5804			SNG	62	C	300	X	5.0	10	5.0 A		15	T		*500*	*/5500*	*2.0*		*5.0 A*		3/
2N5810			SNA	0.5	A	25	O	0.75	60	2.0 m							*.75*		*500 m*		
2N5811			SNA	0.5	A	25	O	0.75	60	2.0 m							*.75*		*500 m*		
2N5812			SNA	0.5	A	25	O	0.75	150	2.0 m							*.75*		*500 m*		
2N5813			SPA	0.5	A	25	O	0.75	150	2.0 m							*.75*		*500 m*		
2N5814			SNA	0.5	A	40	O	0.75	60	2.0 m							*.75*		*500 m*		
2N5815			SPA	0.5	A	40	O	0.75	60	2.0 m							*.75*		*500 m*		
2N5816			SNA	0.5	A	40	O	0.75	100	2.0 m							*.75*		*500 m*		
2N5817			SPA	0.5	A	40	O	0.75	100	2.0 m							*.75*		*500 m*		
2N5818			SNA	0.5	A	40	O	0.75	150	2.0 m							*.75*		*500 m*		
2N5819			SPA	0.5	A	40	O	0.75	150	2.0 m							*.75*		*500 m*		
2N5820			SNA	0.5	A	60	O	0.75	60	2.0 m							*.75*		*500 m*		
2N5821			SPA	0.5	A	60	O	0.5	60	2.0 m							*.75*		*500 m*		
2N5822			SNA	0.5	A	60	O	0.5	100	2.0 m							*.75*		*500 m*		
2N5823			SPA	0.5	A	60	O	0.75	100	2.0 m							*.75*		*500 m*		
2N5824			SNA	0.36	A	40	O	0.1	60	2.0 m							*.12*		*10 m*		

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C @ I_C/I_B	& I_C	Unit	PACKAGE To-Case No.
2N5825			SNA	0.36	A	40	O	0.1	100	2.0	m						.12		10	m	
2N5826			SNA	0.36	A	40	O	0.1	150	2.0	m										
2N5827,A			SNE	0.36	A	40	O	0.1	250	2.0	m							5.0			
2N5828,A			SNE	0.36	A	40	O	0.1	400	2.0	m							5.0			
★ 2N5829		1	SPF	0.2	A	30	O	0.03	20	2.0	m	1200	M	0.8			17	2.5	450	M	72/20
2N5830			SNA	.625	A	100	O	0.6	80	10	m	100	T				.25		50	m	106/
2N5831			SNA	.625	A	140	O	0.6	80	10	m	100	T				.25		50	m	106/
2N5832			SNA	.625	A	140	O	0.6	175	10	m	100	T				.25		50	m	106/
2N5833			SNA	.625	A	180	O	0.6	50	10	m	100	T				.25		50	m	106/
2N5834			SPH	5.0	A	40	O	1.0	10	250	m			10			10		175	M	39/
★ 2N5835		2	SNI	0.2	A		5	.015	25	10	m	2500	T	0.8	.25*/						72/20
★ 2N5836		2	SNI	2.0	C	10	O	0.2	25	50	m	2000	T		3.5/.32*						46/46
★ 2N5837		2	SNI	2.0	C	5.0	O	0.3	25	100	m	1700	T		5.0/.65*						46/46
2N5838			SNG	57	C	275	X	3.0	8.0	3.0	A	5.0	T		1500/4500		1.0		3.0	A	3/
2N5839			SNG	57	C	300	X	3.0	10	2.0	A	5.0	T		1500/5250		1.5		2.0	A	3/
2N5840			SNG	57	C	375	X	3.0	10	2.0	A	5.0	T		1750/4500		1.5		2.0	A	
★ 2N5841		2	SNI	0.35	C	10	O	0.1	25	25	m	2200	T	1.5	0.6*/0.5*						72/20
★ 2N5842		2	SNS	0.35	C	10	O	0.1	25	25	m	1700	T	1.5	0.6*/0.5*						72/20
2N5843	MD3250A		SPA	0.5	A	40	O	0.05	50	0.1	m	200	T					6.0			78/654
2N5844	MD3251A		SPA	0.5	A	40	O	0.05	100	0.1	m	250	T					6.0			78/654
★ 2N5845		2	SNS	1.2	C	40	O	0.6	25	500	m	200	T	9.0	40/60		.6		500	m	92/29
★ 2N5845A			SNS	1.2	C	40	O	0.6	35	500	m	250	T		30/50		.5		500	m	92/29
★ 2N5846			SNP	10	C	36	S	1.0	5.0	250	m			25	3.5/		10		50	M	102/24
★ 2N5847		2	SNP	20	C	36	S	2.0	5.0	0.5	A			90	8.0/		10		50	M	/145
★ 2N5848		2	SNP	50	C	48	S	3.5	3.0	1.2	A			125	20/		8		50	M	/145
★ 2N5849		2	SNP	100	C	48	S	7.0	3.0	2.4	A			230	40/		7.5		50	M	/145
2N5851			SNF	0.5	C	15	O	0.1	40	10	m	800	T					3*	200	M	72/20
2N5852			SNF	0.5	C	15	O	0.1	40	10	m	1100	T					3*	200	M	72/20
2N5853			SPA	66	C	80	O	10	30	5.0	A	15	T				.9		5.0	A	61/
2N5854			SNA	66	C	80	O	10	30	5.0	A	20	T				.9		5.0	A	61/
2N5855			SPA	0.75	A	60	O	1.0	50	150	m	100	T	15			.4		150	m	105/
2N5856			SNA	0.75	A	60	O	1.0	50	150	m	100	T	15			.4		150	m	105/
2N5857			SPA	0.75	A	80	O	1.0	50	150	m	100	T	15			.4		150	m	105/
2N5858			SNA	0.75	A	80	O	1.0	50	150	m	100	T	15			.4		150	m	105/
★ 2N5859		2	SNS	5.0	C	40	O	2.0	15	1.0	A	250	T		35/60						39/79
2N5860	2N3725		SNS	5.0	C	45	O	2.0	15	1.0	A	250	T		25/60						39/79
★ 2N5861		2	SNS	5.0	C	50	O	2.0	25	0.5	A	200	T		25/60						
★ 2N5862		2	SNP	80	C	35	O	8.0	5.0	3.0	A			130	75/		7.0		150	M	/145
2N5864	2N4404		SPA	1.25	A	70	O	1.5	50	150	m	50	T				.9		300	m	39/79
2N5865	2N4406	2	SPG	1.25	A	50	O	1.0	40	150	m	100	T		120/500		1.2		500	m	39/79
★ 2N5867		2	SPG	87.5	C	60	O	5.0	20	1.5	A	4.0	T	200	700/1800		2.0		5.0	A	3/11
★ 2N5868		2	SPG	87.5	C	80	O	5.0	20	1.5	A	4.0	T	200	700/1800		2.0		5.0	A	3/11
★ 2N5869			SNG	87.5	C	60	O	5.0	20	1.5	A	4.0	T	150	700/1800		2.0		5.0	A	3/11
★ 2N5870		2	SNG	87.5	C	80	O	5.0	20	1.5	A	4.0	T	150	700/1800		2.0		5.0	A	3/11
★ 2N5871		2	SPG	100	C	60	O	7.0	20	2.5	A	4.0	T	300	700/1800		2.0		7.0	A	3/11
★ 2N5872		2	SPG	100	C	80	O	7.0	20	2.5	A	4.0	T	300	700/1800		2.0		7.0	A	3/11
★ 2N5873		2	SNG	100	C	60	O	7.0	20	2.5	A	4.0	T	250	700/1800		2.0		7.0	A	3/11
★ 2N5874		2	SNG	100	C	80	O	7.0	20	2.5	A	4.0	T	250	700/1800						3/11
★ 2N5875		2	SPG	150	C	60	O	10	20	4.0	A	4.0	T	500	700/1800		3.0		10	A	3/11
★ 2N5876		2	SPG	150	C	80	O	10	20	4.0	A	4.0	T	500	700/1800		3.0		10	A	3/11
★ 2N5877		2	SNG	150	C	60	O	10	20	4.0	A	4.0	T	300	700/1800		3.0		10	A	3/11
★ 2N5878		2	SNG	150	C	80	O	10	20	4.0	A	4.0	T	300	700/1800		3.0		10	A	3/11
★ 2N5879			SPG	160	C	60	O	15	20	6.0	A	4.0	T	600	700/1800		4.0		12	A	3/11
★ 2N5880		2	SPG	160	C	80	O	15	20	6.0	A	4.0	T	600	700/1800		4.0		12	A	3/11
★ 2N5881		2	SNG	160	C	60	O	15	20	6.0	A	4.0	T	400	700/1800		4.0		12	A	3/11
★ 2N5882		2	SNG	160	C	80	O	15	20	6.0	A	4.0	T	400	700/1800		4.0		12	A	3/11
★ 2N5883		2	SPG	200	C	60	O	25	20	10	A	4.0	T	1000	700/1800		4.0		20	A	3/11
★ 2N5884		2	SPG	200	C	80	O	25	20	10	A	4.0	T	1000	700/1800		4.0		20	A	3/11
★ 2N5885		2	SNG	200	C	60	O	25	20	10	A	4.0	T	500	700/1800		4.0		20	A	3/11
★ 2N5886		2	SNG	200	C	80	O	25	20	10	A	4.0	T	500	700/1800		4.0		20	A	3/11
★ 2N5887		2	GPA	57	C	15	O	7.0	15	0.5	A	0.25	T				.35		5.0	A	66/80
★ 2N5888		2	GPA	57	C	25	O	7.0	15	0.5	A	0.25	T				.35		5.0	A	66/80
★ 2N5889		2	GPA	57	C	25	O	7.0	30	0.5	A	0.25	T				.35		5.0	A	66/80
★ 2N5890		2	GPA	57	C	35	O	7.0	30	0.5	A	0.25	T				.35		5.0	A	66/80
★ 2N5891		2	GPA	57	C	45	O	7.0	30	0.5	A	0.25	T				.35		5.0	A	66/80
★ 2N5892		2	GPA	57	C	60	O	5.0	30	0.5	A	0.25	T				.35		5.0	A	66/80
★ 2N5893		2	GPA	57	C	25	O	5.0	60	0.5	A	0.25	T				.35		5.0	A	66/80
★ 2N5894		2	GPA	57	C	35	O	5.0	60	0.5	A	0.25	T				.35		5.0	A	66/80
★ 2N5895		2	GPA	57	C	45	O	5.0	60	0.5	A	0.25	T				.35		5.0	A	66/80
★ 2N5896		2	GPA	57	C	60	O	5.0	60	0.5	A	0.25	T				.35		5.0	A	66/80

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF @ f dB Max	Unit	PACKAGE To-Case No.
														t_{on} ns Max	t_{off} ns Max	$V_{CE(sat)}$ Volts Max @ $\frac{I_C}{I_B}$ & I_C			
★ 2N5897		2	GPA	57	C	25	O	5.0	100	0.5 A	0.25	T				.35		5.0 A	66/80
★ 2N5898		2	GPA	57	C	35	O	5.0	100	0.5 A	0.25	T				.35		5.0 A	66/80
★ 2N5899			GPA	57	C	45	O	5.0	100	0.5 A	0.25	T				.35		5.0 A	66/80
★ 2N5900		2	GPA	57	C	60	O	5.0	100	0.5 A	0.25	T				.35		5.0 A	66/80
★ 2N5901		2	GPA	57	C	25	O	5.0	175	0.5 A	0.25	T				.35		5.0 A	66/80
2N5902	THRU		FET	Table 9															
2N5909			FET	Table 9															
2N5910			SPS	0.31	A	20	O	0.05	30	.01 A	700	T		15/20					106/
2N5911			FET	Table 9															
2N5912			FET	Table 9															
2N5913			SNH	3.5	C	14	O	0.33					15			12		175 M	39/79
2N5914			SNH	5.7	C	14	O	0.5					15			7.0		470 M	
2N5916			SNH	4.0	C	24	O	0.2	20	50 m	1000	T				10		400 M	
2N5917			SNH	4.0	C	24	O	0.2	20	50 m	1000	T				10		400 M	
2N5918			SNH	10	C	24	O	0.75					13			8.0		400 M	
2N5919			SNH	25	C	30	O	1.5					22			6.0		400 M	
2N5919A			SNH	25	C	30	O	4.5					22			6.0		400 M	216/
2N5920			SNH	3.5	C	50	R	0.25					3.0			10		2000 M	
2N5921			SNH	14.5	C	50	R	0.7					8.5			7.0		2000 M	
2N5922			SNH	5.0	C	35	O	.425										1000 M	
2N5923			SNH	6.0	C	35	O	0.75					6.0					1000 M	
2N5924			SNH	10	C	35	O	1.5					10					1000 M	
D 2N5925			SNH	13	C	35	O	2.5					20					1000 M	
2N5926			SNS	200	C	120	O	50	10	50 A	5.0	T		600/1000		.6		50 A	63/188
2N5927			SNS	200	C	120	O	100	10	70 A	5.0	T		600/1000		.75		50 A	114/177
2N5928			SNS	200	C	120	O	100	10	100 A	5.0	T		700/300		1.0		100 A	114/177
2N5929			SNS	100	C	80	X	30	20	10 A	30	T		500/800		2.0		10 A	
2N5930			SNS	100	C	120	X	30	20	10 A	30	T		500/800		2.0		10 A	
2N5931			SNS	100	C	160	X	30	20	10 A	30	T		500/800		2.0		10 A	
2N5932			SNS	100	C	60	X	30	20	10 A	30	T		600/900		2.0		20 A	
2N5933			SNS	100	C	100	X	30	20	20 A	30	T		600/900		2.0		20 A	
2N5934			SNS	100	C	140	X	30	20	20 A	30	T		600/900		2.0		20 A	
2N5935			SNS	100	C	80	X	30	20	30 A	30	T		700/1000		2.0		30 A	
2N5936			SNS	100	C	120	X	30	20	30 A	30	T		700/1000		2.0		30 A	
2N5937			SNS	100	C	160	X	30	20	30 A	30	T		600/400		2.0		30 A	
2N5938			SNA	2.5	A	50	O	3.0	30	1.0 A	150	T	80			.75		3.0 A	
2N5939			SNA	2.0	A	80	O	10	40	5.0 A	120	T				1.0		10 A	111/
2N5940			SNA	2.0	A	70	O	10	40	5.0 A	120	T				1.0		10 A	
★ 2N5941		2	SNP	80	C	65	S	6.0	10	0.5 A	50	T	125	40/		13		30 M	/211
★ 2N5942			SNP	140	C	65	S	12	10	1.0 A	50	T	250	80/		13		30 M	/211
★ 2N5943		2	SNF	3.5	C	30	O	0.4	25	50 m	1200	T				7.0	8.0	250 M	39/79
★ 2N5944		2	SNP	5.0	C	36	S	0.4	20	0.1 A			15	2.0/		9.0		470 M	/244
★ 2N5945		2	SNP	15	C	36	S	0.8	20	0.2 A			25	4.0/		8.0		470 M	/244
★ 2N5946		2	SNP	37.5	C	36	S	2.0	20	0.5 A			45	10/		6.0		470 M	/244
★ 2N5947		2	SNF	16	C	30	O	0.4	25	75 m	1100	T				10	8.5	200 M	/144
2N5949	THRU		FET	Table 9															
2N5953			FET	Table 9															
2N5954			SPA	40	C	85	R	6.0	20	2.0 A	5.0	T				2.0		6.0 A	66/80
2N5956			SPA	40	C	45	R	6.0	20	3.0 A	5.0	T				2.0		6.0 A	66/80
2N5957	MJ7000		SNS	100	C	100	O	20	30	10 A	10	T	350	500/1000					61/9
2N5958			SPS	100	C	100	O	20	30	10 A	10		675	1100/1200		0.9	10	10 A	61/9
2N5959			SNS	100	C	100	O	20	30	10 A	10		350	1100/1200		0.9	10	10 A	61/9
2N5960			SPS	100	C	100	O	20	30	10 A	10		675	1100/1200		0.9	10	10 A	61/9
2N5961			SNE	.625	A	60	O		150	10 m	100	T					6.0	1000 H	92/29
2N5962			SNE	.625	A	45	O		600	10 m	100	T					6.0	1000 H	92/29
2N5963			SNE	.625	A	30	O		.2K	10 m	150	T					6.0	1000 H	92/29
2N5964			SNA	0.7	A	150	O	0.6	50	10 m	100	T				.2		10 m	105/
2N5965			SNA	0.7	A	180	O	0.6	50	10 m	100	T				.2		10 m	105/
2N5966			SNS	125	C	100	O	30	25	15 A	10		550	500/1000		2.0	6.0	5.0 A	63/188
2N5967			SPS	125	C	100	O	30	25	15 A	10		875	500/1000		2.0	6.0	5.0 A	63/188
2N5968			SNS	125	C	100	O	30	25	15 A	10		550	500/1000		2.0	6.0	5.0 A	63/188
2N5969			SPS	125	C	100	O	30	25	15 A	10		875	500/1000		2.0	6.0	5.0 A	
2N5970			SNG	85.5	C	80	X	15	20	5.0 A	4.0	T		600/1900		1.0		5.0 A	3/
2N5971			SNG	85.5	C	80	X	15	50	5.0 A	4.0	T		600/1900		.7		5.0 A	3/
2N5972			SNG	85.5	C	90	X	15	25	5.0 A	4.0	T		600/1900		1.0		5.0 A	3/
2N5973			SNG	85.5	C	100	X	15	25	0.5 A	4.0	T		600/2000		1.0		5.0 A	3/
★ 2N5974	2N4904	2	SPA	75	C	40	O	5.0	20	2.5 A	2.0	T	300			2.0		7.0 A	/90
★ 2N5975	2N5871	2	SPA	75	C	60	O	5.0	20	2.5 A	2.0	T	300			.6		2.5 A	/90
★ 2N5976	2N5872	2	SPA	75	C	80	O	5.0	20	2.5 A	2.0	T	300			.6		2.5 A	/90
★ 2N5977	2N4913	2	SNA	75	C	40	O	5.0	20	2.5 A	2.0	T	200			.6		2.5 A	/90

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} Min @ I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min @ $V_{CE(sat)}$ Volts Max	NF dB Max @ I_C/I_B	f & I_C	Unit	PACKAGE To-Case No. No.
★ 2N5978	2N5873	2	SNA	75	C	60	0	5.0	20	2.5 A	2.0	T	200			.6		2.5 A		/90
★ 2N5979	2N5874	2	SNA	75	C	80	0	5.0	20	2.5 A	2.0	T	200			.6		2.5 A		/90
★ 2N5980	MJ2267	2	SPA	90	C	40	0	8.0	20	4.0 A	2.0	T	350			.6		4.0 A		/90
★ 2N5981	2N5875	2	SPA	90	C	60	0	8.0	20	4.0 A	2.0	T	350			.6		4.0 A		/90
★ 2N5982	2N5876	2	SPA	90	C	80	0	8.0	20	4.0 A	2.0	T	350			.6		4.0 A		/90
★ 2N5983	2N5877	2	SNA	90	C	40	0	8.0	20	4.0 A	2.0	T	250			.6		4.0 A		/90
★ 2N5984	2N5877	2	SNA	90	C	60	0	8.0	20	4.0 A	2.0	T	250			.6		4.0 A		/90
★ 2N5985	2N5878	2	SNA	90	C	80	0	8.0	20	4.0 A	2.0	T	250			.6		4.0 A		/90
★ 2N5986	2N5879	2	SPA	100	C	40	0	12	20	6.0 A	2.0	T	500			.7		6.0 A		/90
★ 2N5987	2N5879	2	SPA	100	C	60	0	12	20	6.0 A	2.0	T	500			.7		6.0 A		/90
★ 2N5988	2N5880		SPA	100	C	80	0	12	20	6.0 A	2.0	T	500			.7		6.0 A		/90
★ 2N5989	2N5881	2	SNA	100	C	40	0	12	20	6.0 A	2.0	T	300			.7		6.0 A		/90
★ 2N5990	2N5881	2	SNA	100	C	60	0	12	20	6.0 A	2.0	T	300			.7		6.0 A		/90
★ 2N5991	2N5882	2	SNA	100	C	80	0	12	20	6.0 A	2.0	T	300			.7		6.0 A		/90
2N5992			SNH	35.7	C	30	0	5.0					70			11		66 M		
2N5993			SNH	35.7	C	18	0	5.0					100			12		66 M		
2N5994			SNH	35.7	C	30	0	5.0					70			7.0		118 M		
2N5995			SNH	10.7	C	14	0	1.5					80			9.7		175 M		
2N5996		2	SNH	35.7	C	18	0	5.0					100					175 M		
2N6000			SNE	0.8	C	25	0		100	10 m	350	T		*25/320*			3.0			
2N6001			SPE	0.8	C	25	0		100	10 m	700	T		*23/230*			3.0			
2N6002			SNE	0.8	C	25	0		250	10 m	450	T		*25/410*			2.0			
2N6003			SPE	0.8	C	25	0		250	10 m	800	T		*23/300*			1.5			
2N6004			SNE	0.8	C	40	0		100	10 m	350	T		*25/320*			3.0			
2N6005			SPE	0.8	C	40	0		100	10 m	700	T		*23/230*			3.0			
2N6006			SNE	0.8	C	40	0		250	10 m	450	T		*25/410*			2.0			
2N6007			SPE	0.8	C	40	0		250	10 m	800	T		*23/300*			1.5			
2N6010			SNE	1.0	C	40	0		100	10 m	330	T		*37/400*			5.0			
2N6011			SPE	1.0	C	40	0		100	10 m	240	T		*45/425*			3.0			
2N6012			SNE	1.0	C	40	0		250	10 m	420	T		*37/500*			3.0			
2N6013			SPE	1.0	C	40	0		250	10 m	360	T		*45/525*			2.0			
2N6014			SNE	1.0	C	60	0		100	10 m	330	T		*37/400*			5.0			
2N6015			SPE	1.0	C	60	0		100	10 m	240	T		*45/425*			3.0			
2N6016			SNE	1.0	C	60	0		250	10 m	420	T		*37/500*			3.0			
2N6017			SPE	1.0	C	60	0		250	10 m	360	T		*45/525*			2.0			
2N6021	2N5867		SPA	36	C	70	0	4.0	30	0.5 A	0.8	T				*1.0*		.5 A		
2N6022	2N4920		SPA	36	C	70	0	4.0	30	0.5 A	0.8	T				*1.0*		.5 A		
2N6023	2N5867		SPA	36	C	40	0	4.0	30	1.0 A	0.8	T				*1.0*		1.0 A		
2N6024	2N4918		SPA	36	C	40	0	4.0	30	1.0 A	0.8	T				*1.0*		1.0 A		
2N6025	2N5867		SPA	36	C	60	0	4.0	20	1.5 A	0.8	T				*1.0*		1.5 A		
2N6026	2N4919		SPA	36	C	60	0	4.0	20	1.5 A	0.8	T				*1.0*		1.5 A		
★ 2N6027			UJT	Table 8																
★ 2N6028			UJT	Table 8																
★ 2N6029		2	SPA	200	C	100	0	16	25	8.0 A	1.0	T	1000			*2.0*		16 A		3/11
★ 2N6030		2	SPA	200	C	120	0	16	20	8.0 A	1.0	T	1000			*2.0*		16 A		3/11
★ 2N6031		2	SPA	200	C	140	0	16	15	8.0 A	1.0	T	1000			*2.0*		16 A		3/11
2N6032	2N5686		SNG	80	C	90	0		10	50 A	50	T		*1000/2000*		*1.3*		50 A		
2N6033	2N5686		SNG	80	C	120	0		10	40 A	50	T		*1000/2000*		*1.0*		40 A		
★ 2N6034		2	SPA	40	C	40	0	4.0	750	2.0 A	25	T	200			*2.0*		2.0 A		/77
★ 2N6035		2	SPA	40	C	60	0	4.0	750	2.0 A	25	T	200			*2.0*		2.0 A		/77
★ 2N6036		2	SPA	40	C	80	0	4.0	750	2.0 A	25	T	200			*2.0*		2.0 A		/77
★ 2N6040		2	SPA	75	C	60	0	8.0	100	8.0 A	4.0	T	300			*4.0*		8.0 A		/90
★ 2N6041			SPA	75	C	80	0	8.0	100	8.0 A	4.0	T				*4.0*		8.0 A		/90
★ 2N6042		2	SPA	75	C	100	0	8.0	100	8.0 A	4.0	T	300			*4.0*		8.0 A		/90
★ 2N6043		2	SNA	75	C	60	0	8.0	100	8.0 A	4.0	T	200			*4.0*		8.0 A		/90
★ 2N6044		2	SNA	75	C	80	0	8.0	100	8.0 A	4.0	T				*4.0*		8.0 A		/90
★ 2N6045			SNA	75	C	100	0	8.0	100	8.0 A	4.0	T	200			*4.0*		8.0 A		/90
2N6046	MJ7000		SNS	114	C	60	0		20	20 A	30	T		*600/900*		*2.0*		20 A		63/
2N6047	MJ7000		SNS	114	C	100	0		20	20 A	30	T		*600/900*		*2.0*		20 A		63/
2N6048	2N6280		SNS	114	C	140	0		20	20 A	30	T		*600/900*		*2.0*		20 A		63/
★ 2N6049		2	SPA	75	C	55	0	4.0	25	500 m	3.0	T	200			*2.0*		4.0 A		66/80
★ 2N6050		2	SPA	150	C	60	0	12	750	6.0 A	4.0	T	500			*2.0*		6.0 A		3/11
★ 2N6051		2	SPA	150	C	80	0	12	750	6.0 A	4.0	T				*2.0*		6.0 A		3/11
★ 2N6052		2	SPA	150	C	100	0	12	750	6.0 A	4.0	T	500			*2.0*		6.0 A		3/11
★ 2N6053			SPA	150	C	60	0	8.0	750	6.0 A	4.0	T	300			*2.0*		6.0 A		3/11
★ 2N6054		2	SPA	150	C	80	0	8.0	750	6.0 A	4.0	T	300			*2.0*		6.0 A		3/11
★ 2N6055		2	SNA	100	C	60	0	8.0	750	4.0 A	4.0	T	200			*2.0*		4.0 A		3/11
★ 2N6056		2	SNA	100	C	80	0	8.0	750	4.0 A	4.0	T	200			*2.0*		4.0 A		3/11
★ 2N6057			SNA	150	C	60	0	12	750	6.0 A	4.0	T	300			*2.0*		6.0 A		3/11
★ 2N6058		2	SNA	150	C	80	0	12	750	6.0 A	4.0	T				*2.0*		6.0 A		3/11

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF dB Max	@ f & I_C	Unit	PACKAGE To-Case No. No.
														t_{on} ns Max	t_{off} ns Max	$V_{CE(sat)}$ Volts Max		I_C @ I_B		
★ 2N6059		2	SNA	150	C	100	O	12	750	6.0 A	4.0	T	300			2.0		6.0 A		3/11
2N6060			SNS	150	C	100	O	50	25	20 A	10		850	500/1000		2.6	7.1	50 A		63/
2N6061			SPS	150	C	100	O	50	25	20 A	10		1325	500/1000		2.6	7.1	50 A		63/
2N6062	MJ7000		SNS	150	C	100	O	50	25	20 A	10		850	500/1000		2.6	7.1	50 A		63/
2N6063			SPS	150	C	100	O	50	25	20 A	10		1325	500/1000		2.6	7.1	50 A		63/
★ 2N6064		2	GPS	56	C	80	O	10	20	3.0 A	300	T		100/150		.8		10 A		/8
★ 2N6065		2	GPS	56	C	120	O	10	20	3.0 A	300	T		100/150		.8		10 A		/8
★ 2N6066		2	GPS	56	C	160	O	10	20	3.0 A	300	T		100/150		.8		10 A		/8
★ 2N6067		2	SPG	.625	A	40	O	1.0	50	100 m	150	T		40/80		.3		100 m		92/29
2N6068	THRU		THY	Table 6																
2N6075B			THY	Table 6																
2N6076	MPS6519		SPA	360M	A	25	O		100	10 m						.25		10 m		
2N6077			SNG	25.7	C	300	X		12	1.2 A	1.0	T		750/5750		.5		1.2 A		66/80
2N6078			SNG	25.7	C	275	X		12	1.2 A	1.0	T		750/5750		.5		1.2 A		66/80
2N6079			SNG	25.7	C	375	X		12	1.2 A	1.0	T		750/5750		.5		1.2 A		66/80
★ 2N6080		2	SNP	12	C	36	S	1.0	5.0	.25 A			20	4.0/		12		175 M		/145
★ 2N6081		2	SNP	31	C	36	S	2.5	5	500 m			85	15/		6.3		175 M		/145
★ 2N6082		2	SNP	50	C	36	S	4.0	5.0	1.0 A			130	25/		6.2		175 M		/145
★ 2N6083		2	SNP	50	C	36	S	4.0	5.0	1.0 A			130	30/		5.7		175 M		/145
★ 2N6084		2	SNP	75	C	36	S	6.0	5.0	1.0 A			200	40/				175 M		/145
2N6085			SNE	0.75	C	45	O		60	10 u	60	T					4.0	1000 H		78/
D 2N6086			SNE	0.75	C	45	O		150	10 u	60	T					3.0	1000 H		78/
2N6087			SNE	0.75	C	45	O		60	10 u	60	T					4.0	1000 H		78/
D 2N6088			SNE	0.75	C	45	O		150	10 u	60	T					3.0	1000 H		78/
D 2N6089			SNE	0.75	C	45	O		60	10 u	60	T					4.0	1000 H		78/
D 2N6090			SNE	0.75	C	45	O		150	10 u	60	T					3.0	1000 H		78/
D 2N6091			SNE	0.75	C	60	O		60	10 u	60	T					4.0	1000 H		78/
D 2N6092			SNE	0.75	C	60	O		150	10 u	60	T					3.0	1000 H		78/
2N6093			SNH	83.3	C	35	O		20	5.0 A	100	T	250			13		30 M		
★ 2N6094		2	SNP	8.0	C	18	O	1.0	5.0	.25 A			20	4.0/		12		175 M		/211
★ 2N6095		2	SNP	20	C	18	O	2.5	15	0.5 A			120	15/		6.3		175 M		/211
★ 2N6096		2	SNP	40	C	18	O	4.0	15	0.5 A			190	30/		5.7		175 M		/211
★ 2N6097		2	SNP	60	C	18	O	6.0	15	0.5 A			400	40/		4.5		175 M		/211
2N6098	2N5877		SNA	75	C	60	O	10	20	4.0 A	0.8	T				2.5		10 A		220AA/
2N6099	2N5983		SNA	75	C	60	O	10	20	4.0 A	0.8	T				2.5		10 A		220AB/
2N6100	2N5878		SNA	75	C	70	O	10	20	5.0 A	0.8	T				2.5		10 A		220AA/
2N6101	2N5991		SNA	75	C	70	O	10	20	5.0 A	0.8	T				2.5		10 A		220AB/
2N6102	MJ2801		SNA	75	C	40	O	16	15	8.0 A	0.8	T				2.5		16 A		220AA/
2N6103			SNA	75	C	40	O	16	15	8.0 A	0.8	T				2.5		16 A		220AB/
2N6104			SNH	36	C	30	O	4.5					35					400 M		
2N6105			SNH	36	C	30	O	4.5					3.5					400 M		
2N6106	2N5872		SPA	40	C	70	O		30	2.0 A	10	T	250			3.5	2.3	7.0 A		220AB/
2N6107			SPA	40	C	70	O		30	2.0 A	10	T	250			3.5	2.3	7.0 A		220AA/
2N6108	2N5871		SPA	40	C	50	O		30	2.5 A	10	T	250			3.5	2.3	7.0 A		220AA/
2N6109			SPA	40	C	50	O		30	2.5 A	10	T	250			3.5	2.3	7.0 A		220AB/
2N6110	2N4904		SPA	40	C	30	O		30	3.0 A	10	T	250			3.5	2.3	7.0 A		220AA/
2N6111			SPA	40	C	30	O		30	3.0 A	10	T	250			3.5	2.3	7.0 A		220AB/
2N6112			SNA	0.36	C	30	O		185	2.0 m	160	T	10			.3		10 m		
2N6114	THRU		UJT	Table 8																
2N6118			UJT	Table 8																
2N6120			UJT	Table 8																
2N6122			SNA	40	C	60	O	4.0	25	1.5 A	2.5	T				.6		1.5 A		220AB/
2N6123			SNA	40	C	80	O	4.0	20	1.5 A	2.5	T				.6		1.5 A		220AB/
D 2N6124			SPA	40	C	45	O	4.0	25	1.5 A	2.5	T				.6		1.5 A		220AB/
D 2N6125			SPA	40	C	60	O	4.0	25	1.5 A	2.5	T				.6		1.5 A		220AB/
D 2N6126			SPA	40	C	80	O	4.0	20	1.5 A	2.5	T				.6		1.5 A		220AB/
2N6127			SPA	67	C	80	O		30	5.0 A	40	T	500			2.2		10 A		61/
2N6128			SNA	67	C	80	O		30	5.0 A	50	T	275			2.2		10 A		61/
2N6129			SNA	50	C	40	O	7.0	20	2.5 A	2.5	T				1.4		7.0 A		220AB/
2N6130			SNA	50	C	60	O	7.0	20	2.5 A	2.5	T				1.4		7.0 A		220AB/
2N6131			SNA	50	C	40	O	7.0	20	2.5 A	2.5	T				2.0		7.0 A		
2N6132			SPA	50	C	40	O	7.0	20	2.5 A	2.5	T				1.4		7.0 A		220AB/
2N6133			SPA	50	C	60	O	7.0	20	2.5 A	2.5	T				1.4		7.0 A		220AB/
2N6134			SPA	50	C	80	O	7.0	20	2.5 A	2.5	T				1.8		7.0 A		220AB/
D 2N6135			SNF	5.0	C	25	O	0.25	25	80 m	1100	T				10	9.0	250 M		/145
★ 2N6136			SNP	60	C	18	O	6.0	20	1.0 A			70	25/		4.0		470 M		/145
★ 2N6137			UJT	Table 8																
★ 2N6138			UJT	Table 8																
★ 2N6139	THRU		THY	Table 6																
★ 2N6165			THY	Table 6																

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min @ $V_{CE(sat)}$ Volts Max	NF @ f dB Max @ I_C/I_B	& I_C	Unit	PACKAGE To-Case No. No.
★ 2N6166		2	SNP	117	C	35	O	9.0	5.0	500	m			130	60/		6.0		150	M	/211
2N6167	THRU		THY	Table 6																	
2N6174			THY	Table 6																	
2N6175			SNA	20	C	250	O	1.0	30	20	m	21	T	8.5							
2N6176			SNA	20	C	300	O	1.0	30	20	m	21	T	8.5							
2N6177			SNA	20	C	350	O	1.0	30	50	m	21	T	8.5							
2N6178			SNS	10	C	75	X		30	0.5	A	50	T		*80/800*		*.5*		*.5*	*A*	
2N6179			SNS	10	C	50	X		40	0.5	A	50	T		*80/800*		*.8*		*5*	*A*	
2N6180			SPS	10	C	75	X		30	0.5	A	50	T		*100/1000*		*.7*		*.5*	*A*	
2N6181			SPS	10	C	50	X		40	0.5	A	50	T		*100/1000*		*1.2*		*.5*	*A*	
★ 2N6182			SPS	60	C	80	O	10	30	2.0	A	30	T	300	*200/400*		*.7*		*2.0*	*A*	59/160
★ 2N6183			SPS	60	C	80	O	10	60	2.0	A	30	T	300	*200/400*		*.7*		*2.0*	*A*	59/160
★ 2N6184			SPS	60	C	100	O	10	30	2.0	A	30	T	300	*200/400*		*.7*		*2.0*	*A*	59/160
★ 2N6185			SPS	60	C	100	O	10	60	2.0	A	30	T	300	*200/400*		*.7*		*2.0*	*A*	59/160
★ 2N6186		2	SPG	60	C	80	O	10	30	2.0	A	30	T	300	*200/2200*						59/
★ 2N6187		2	SPG	60	C	80	O	10	60	2.0	A	30	T	300	*200/2200*						59/
★ 2N6188		2	SPG	60	C	100	O	10	30	2.0	A	30	T	300	*200/2200*						59/
★ 2N6189		2	SPG	60	C	100	O	10	60	2.0	A	30	T	300	*200/2200*						59/
★ 2N6190		2	SPG	10	C	80	O	5.0	30	2.0	A	30	T	300	*200/2200*						39/79
★ 2N6191		2	SPG	10	C	80	O	5.0	60	2.0	A	30	T	300	*200/2200*						39/79
★ 2N6192		2	SPG	10	C	100	O	5.0	30	2.0	A	30	T	300	*200/2200*						39/79
★ 2N6193		2	SPG	10	C	100	O	5.0	60	2.0	A	30	T	300	*200/2200*						39/79
2N6197			SNP	10	C	35	O							12			13		7500	M	
2N6198			SNP	25	C	35	O							25			10		175	M	
2N6199			SNP	50	C	35	O							50			8.5		175	M	
2N6200			SNP	85	C	35	O							150			8.2		175	M	
2N6201			SNP	140	C	35	O							250			5.4		175	M	
2N6202			SNP	10	C	33	O							12			10		400	M	
2N6203			SNP	20	C	33	O							20			6.8		400	M	
2N6204			SNP	40	C	33	O							40			6.2		400	M	
2N6205			SNP	80	C	33	O							80			5.2		400	M	
2N6206			SNP	10	C	30	O							12			7.0		1000	M	
2N6207			SNP	20	C	30	O							20			5.2		1000	M	
2N6208			SNP	40	C	30	O							40					1000	M	
2N6211			SPG	20	C	275	X		10	1.0	A	20	T		*600/3100*		*1.4*		*1.0*	*A*	66/80
2N6212			SPG	20	C	350	X		10	1.0	A	20	T		*600/3100*		*1.6*		*1.0*	*A*	66/80
2N6213			SPG	20	C	400	X		10	1.0	A	20	T		*600/3100*		*2.0*		*1.0*	*A*	66/80
2N6214			SPA	20	C	450	X		10	1.0	A	20	T				*2.5*		*1.0*	*A*	
2N6215			SNA	135	C	80	X	50	25	25	A	20	T				*.8*		*25*	*A*	63/
2N6216			SNA	71.4	C	200	O		20	5.0	A	20	T	250			*.5*		*5.0*	*A*	3/
2N6217			SNA	71.4	C	80	O		20	5.0	A	20	T	250			*.5*		*5.0*	*A*	3/
2N6218			SNG	0.5	A	300	O	0.05	20	20	m	50	T	5.0	*500/5000*		*1.0*	*10*	*10*	*m*	
2N6219			SNG	0.5	A	250	O	0.05	20	20	m	50	T	5.0	*500/5000*		*1.0*	*10*	*10*	*m*	
2N6220			SNG	0.5	A	200	O	0.05	20	20	m	50	T	5.0	*500/5000*		*2.0*	*10*	*20*	*m*	
2N6221			SNG	0.5	A	150	O	0.05	20	20	m	50	T	5.0	*500/5000*		*2.3*	*10*	*20*	*m*	
2N6222			SNA	0.36	A	60	O	0.1	75	2.0	m			4.0			*.12*	*10*	*10*	*m*	
2N6223			SPA	0.36	A	60	O	0.1	75	2.0	m			4.0			*.25*	*10*	*10*	*m*	
2N6224			SNA	0.36	A	60	O	0.1	150	2.0	m			4.0			*.12*	*10*	*10*	*m*	
2N6225			SPA	0.36	A	60	O	0.1	150	2.0	m			4.0			*.25*	*10*	*10*	*m*	
★ 2N6226		2	SPA	150	C	100	O	6.0	25	3.0	A	1.0	T	450			*1.0*		*3.0*	*A*	3/11
★ 2N6227		2	SPA	150	C	120	O	6.0	20	3.0	A	1.0	T	450			*1.0*		*3.0*	*A*	3/11
★ 2N6228		2	SPA	150	C	140	O	6.0	15	3.0	A	1.0	T	450			*1.0*		*3.0*	*A*	3/11
★ 2N6229		2	SPA	150	C	100	O	10	25	5.0	A	1.0	T	600			*1.0*		*7.5*	*A*	3/11
★ 2N6230		2	SPA	150	C	120	O	10	20	5.0	A	1.0	T	600			*1.0*		*7.5*	*A*	3/11
★ 2N6231		2	SPA	150	C	140	O	10	15	5.0	A	1.0	T	600			*1.0*		*7.5*	*A*	3/11
★ 2N6233		2	SNS	50	C	225	O	5.0	25	1.0	A	20	T	250	*500/400*		*.5*		*1.0*	*A*	66/80
★ 2N6234		2	SNS	50	C	275	O	5.0	25	1.0	A	20	T	250	*500/400*		*.5*		*1.0*	*A*	66/80
★ 2N6235		2	SNS	50	C	325	O	5.0	25	1.0	A	20	T	250	*500/400*		*.5*		*1.0*	*A*	66/80
2N6236	THRU		THY	Table 6																	
2N6241			THY	Table 6																	
2N6246			SPA	125	C	105	R		20	7.0	A	10					*2.5*		*15*	*A*	3/
2N6247			SPA	125	C	85	R		20	6.0	A	10					*3.5*		*15*	*A*	3/
2N6248			SPA	125	C	65	R		20	5.0	A	10					*3.5*		*15*	*A*	3/
2N6249			SNS	100	C	225	X		10	10	A	2.5	T		*200/45*		*1.5*		*10*	*A*	
2N6250			SNS	100	C	300	X		8.0	10	A	2.5	T		*200/45*		*1.5*		*10*	*A*	
2N6251			SNS	100	C	375	X		6.0	10	A	2.5	T		*200/45*		*1.5*		*10*	*A*	
★ 2N6253			SNA	115	C	45	O	15	20	3.0	A	0.8	T				*4.0*		*15*	*A*	3/1
★ 2N6254			SNA	150	C	80	O	15	20	5.0	A	0.8	T				*4.0*		*15*	*A*	3/1
★ 2N6255			SNP	5.0	C	36	S	1.0	5.0	250	m			20	3.0/		7.8		175	M	39/79
★ 2N6256		2	SNP	2.0	C	36	S	0.4	20	.05	A			8.0	0.5/		10		470	M	/249

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	t_{on} ns Max	ΔV_{BE} mV Max	t_{off} ns Max	Gp dB Min	$V_{CE(sat)}$ Volts Max	NF @ f dB Max	I_C/I_B	& I_C	Unit	PACKAGE To-Case No.	No.
★ 2N6257			SNA	150	C	40	O	20	15	8.0 A	0.2	T							1.5			8.0 A		/1	
2N6258			SNA	250	C	80	O		20	15 A	0.4	T							.75			15 A		3/	
2N6259			SNA	250	C	150	O		15	8.0 A	0.2	T							1.0			8.0 A		3/	
2N6260			SNA	29	C	40	O		20	1.5 A	0.8	T							1.5			1.5 A		66/	
2N6261			SNA	50	C	80	O		25	1.5 A	0.8	T							.5			1.5 A		66/	
★ 2N6262			SNA	150	C	150	O	10	20	3.0 A	0.8	T							.5			3.0 A		3/	
2N6263			SNA	20	C	120	O		20	0.5 A	3.2	T							1.2			.5 A		66/	
2N6264	2N5051		SNA	50	C	150	O		20	1.0 A	0.8	T							.5			1.0 A		66/	
2N6265			SNP	7.5	C	50	R						5.0						8.2			2000 M		66/	
2N6266			SNP	14.8	C	50	R	50					11						7.0			2000 M			
2N6267			SNP	21	C	50	R						13						7.0			2000 M			
2N6268			SPA	6.25	C	45	R						5.5												
2N6269			SNA			45	R						5.5												
2N6270			SNA	150	C	80	O	30	20	15 A														3/	
2N6271			SNA	150	C	100	O	30	20	15 A														3/	
2N6272			SNA	150	C	80	O	30	20	15 A														63/	
2N6273			SNA	150	C	100	O	30	20	15 A														63/	
★ 2N6274		2	SNA	250	C	100	O	50	30	20 A	30	T	600						1.0			20 A		/197	
★ 2N6275			SNA	250	C	120	O	50	30	20 A	30	T	600						1.0			20 A		/197	
★ 2N6276			SNA	250	C	140	O	50	30	20 A	30	T	600						1.0			20 A		/197	
★ 2N6277		2	SNA	250	C	150	O	50	30	20 A	30	T	600						1.0			20 A		/197	
★ 2N6278		2	SNA	250	C	100	O	50	30	20 A	30	T	600						1.2			20 A		/188	
★ 2N6279		2	SNA	250	C	120	O	50	30	20 A	30	T	600						1.2			20 A		/188	
★ 2N6280		2	SNA	250	C	140	O	50	30	20 A	30	T	600						1.2			20 A		/188	
★ 2N6281		2	SNA	250	C	150	O	50	30	20 A	30	T	600						1.2			20 A		/188	
★ 2N6282		2	SNA	160	C	60	O	20	750	10 A	4.0	T	400						2.0			10 A		/11	
★ 2N6283		2	SNA	160	C	80	O	20	750	10 A	4.0	T	400						2.0			10 A		/11	
★ 2N6284		2	SNA	160	C	100	O	20	750	10 A	4.0	T	400						2.0			10 A		/11	
★ 2N6285		2	SPA	160	C	60	O	20	750	10 A	4.0	T	600						2.0			10 A		/11	
★ 2N6286		2	SPA	160	C	80	O	20	750	10 A	4.0	T	600						2.0			10 A		/11	
★ 2N6287		2	SPA	160	C	100	O	20	750	10 A	4.0	T	600						2.0			10 A		/11	
2N6288			SNA	16	C	40	O	7.0	30	3.0 A			250						3.5	2.3		7.0 A		220AB/	
2N6289			SNA	16	C	40	O	7.0	30	3.0 A			250						3.5	2.3		7.0 A		220AA/	
2N6290			SNA	16	C	60	O	7.0	30	2.5 A			250						3.5	2.3		7.0 A		220AB/	
2N6291			SNA	16	C	60	O	7.0	30	2.5 A			250						3.5	2.3		7.0 A		220AB/	
2N6292			SNA	16	C	80	O	7.0	30	2.0 A			250											220AB/	
2N6293			SNA	16	C	80	O	7.0	30	2.0 A			250											220AA/	
★ 2N6294		2	SNA	50	C	60	O	4.0	750	2.0 A	4.0	T	120						2.0			2.0 A		66/80	
★ 2N6295		2	SNA	50	C	80	O	4.0	750	2.0 A	4.0	T	120						2.0			2.0 A		66/80	
★ 2N6296		2	SPA	50	C	60	O	4.0	750	2.0 A	4.0	T	200						2.0			2.0 A		66/80	
★ 2N6297		2	SPA	50	C	80	O	4.0	750	2.0 A	4.0	T	200						2.0			2.0 A		66/80	
★ 2N6298		2	SPA	75	C	60	O	8.0	750	4.0 A	4.0	T	300						2.0			4.0 A		66/80	
★ 2N6299		2	SPA	75	C	80	O	8.0	750	4.0 A	4.0	T	300						2.0			4.0 A		66/80	
★ 2N6300		2	SNA	75	C	60	O	8.0	750	4.0 A	4.0	T	200						2.0			4.0 A		66/80	
★ 2N6301		2	SNA	75	C	80	O	8.0	750	4.0 A	4.0	T	200						2.0			4.0 A		66/80	
★ 2N6302			SNA	150	C	120	O	16	15	8.0 A	0.2	T							1.4			8.0 A		/1	
★ 2N6303		1	SPA	1.0	C	80	O	3.0	30	1.5 A	60	T	120						.75			1.5 A		5/31	
★ 2N6304		2	SNF	0.2	C	15	O	.05	25	2.0 m	1400	T							15	4.5		450 M		72/20	
★ 2N6305		2	SNF	0.2	C	15	O	.05	25	2.0 m	1200	T							12	5.5		450 M		72/20	
★ 2N6306		2	SNA	125	C	250	O	8.0	15	3.0 A	5.0	T	250						.8			3.0 A		/11	
★ 2N6307		2	SNA	125	C	300	O	8.0	15	3.0 A	5.0	T	250						1.0			3.0 A		/11	
★ 2N6308		2	SNA	125	C	350	O	8.0	12	3.0 A	5.0	T	250						1.5			3.0 A		/11	
★ 2N6309			SNG	400	C	100	O	90	40	25 A	30	T	1000	400/1250					3.7	10		90 A		114/177	
★ 2N6310			SNG	400	C	120	O	90	40	25 A	30	T	1000	400/1250					3.7	10		90 A		114/177	
★ 2N6311			SNG	400	C	140	O	90	40	25 A	30	T	1000	400/1250					3.7	10		90 A		114/177	
★ 2N6312		1	SPA	75	C	40	O	5.0	25	1.5 A	4.0	T	300						.7			1.5 A		66/80	
★ 2N6313		1	SPA	75	C	60	O	5.0	25	1.5 A	4.0	T	300						.7			1.5 A		66/80	
★ 2N6314		1	SPA	75	C	80	O	5.0	25	1.5 A	4.0	T	300						.7			1.5 A		66/80	
★ 2N6315		2	SNA	90	C	60	O	7.0	4.0	7.0 A	4.0	T	200						2.0			7.0 A		66/80	
★ 2N6316		2	SNA	90	C	80	O	7.0	4.0	7.0 A	4.0	T	200						2.0			7.0 A		66/80	
★ 2N6317			SPA	90	C	60	O	7.0	4.0	7.0 A	4.0	T	300						2.0			7.0 A		66/80	
★ 2N6318		2	SPA	90	C	80	O	7.0	4.0	7.0 A	4.0	T	300						2.0			7.0 A		66/80	
★ 2N6319			SNG	300	C	100	O	80	40	25 A	30	T	1000	400/1250					3.2	10		80 A		3/	
★ 2N6320			SNG	300	C	120	O	80	40	25 A	30	T	1000	400/1250					3.2	10		80 A		3/	
★ 2N6321			SNG	300	C	140	O	80	40	25 A	30	T	1000	400/1250					3.2	10		80 A		3/	
2N6322			SNA	200	C	200	O	30	6.0	30 A	10	T							3.0			30 A		3/	
2N6323			SNA	200	C	300	O	30	6.0	30 A	10	T							3.0			30 A		3/	
2N6324			SNA	200	C	200	O	30	6.0	30 A	10	T							3.0			30 A		3/	
2N6325			SNA	200	C	300	O	30	6.0	30 A	10	T							3.0			30 A		3/	
2N6326			SNA	114	C	60	O	30	6.0	30 A	3.0	T							3.0			30 A		3/	

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	@ I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	t_{on} ns Max	ΔV_{BE} mV Max	t_{off} ns Max	Gp dB Min	NF dB Max	$V_{CE(sat)}$ Volts Max	@ I_C/I_B	& I_C	Unit	PACKAGE To-Case No. No.
2N6327			SNA	114	C	80	O	30	6.0	30	A	3.0	T								3.0		30	A	3/
2N6328			SNA	114	C	100	O	30	6.0	30	A	3.0	T								3.0		30	A	3/
2N6329			SPA	114	C	60	O	30	6.0	30	A	3.0	T								3.0		30	A	3/
2N6330			SPA	114	C	80	O	30	6.0	30	A	3.0	T								3.0		30	A	3/
2N6331			SPA	114	C	100	O	30	6.0	30	A	3.0	T								3.0		30	A	3/
★ 2N6332	THRU		THY	Table 6																					
★ 2N6337			THY	Table 6																					
★ 2N6338		2	SNA	200	C	100	O	25	30	10	A	40	T	300							1.0		10	A	3/11
★ 2N6339		2	SNA	200	C	120	O	25	30	10	A	40	T	300							1.0		10	A	3/11
★ 2N6340		2	SNA	200	C	140	O	25	30	10	A	40	T	300							1.0		10	A	3/11
★ 2N6341		2	SNA	200	C	150	O	25	30	10	A	40	T	300							1.0		10	A	3/11
2N6342	THRU		THY	Table 6																					
2N6349A			THY	Table 6																					
2N6350			SNA	5.0	C	80	R	5.0	2000	5.0	A	50	T	40											33/
2N6351			SNA	5.0	C	150	R	10	1000	5.0	A	50	T	40											33/
2N6352			SNA	5.0	C	80	R	5.0	2000	5.0	A	50	T	40											33/
2N6353			SNA	5.0	C	150	R	10	1000	5.0	A	50	T	40											33/
2N6354			SNA	80	C	130	X	10	20	5.0	A	80	T								.5		5.0	A	3/
★ 2N6355			SNA	150	C	40	O	20	500	4.0	A	0.004	T	600							1.8		4.0	A	/1
★ 2N6356			SNA	150	C	40	O	20	1500	4.0	A	0.004	T	600							1.8		4.0	A	/1
★ 2N6357			SNA	150	C	60	O	20	500	4.0	A	0.004	T	600							1.8		4.0	A	/1
★ 2N6358			SNA	150	C	60	O	20	1500	4.0	A	0.004	T	600							1.8		4.0	A	/1
★ 2N6359			SNA	150	C	80	O	16	15	8.0	A	4.0	T								1.4		8.0	A	/11
★ 2N6360			SNA	150	C	100	O	12	15	6.0	A	4.0	T								1.0		6.0	A	/11
2N6361			SNA	50	C	33	O							35											
2N6362			SNA	100	C	33	O							70											
2N6363			SNA	175	C	33	O							190											
2N6364			SNA	175	C	33	O							190											
2N6365			GPH	0.15	A	10	O		20	0.1	m	200	T							25			10	M	18/
2N6365A			GPH	0.15	A	10	O		20	0.1	m	200	T							25			10	M	18/
★ 2N6366		2	SNP	10	C	36	S	1.0	5.0	.25	A	50	T	20	2.5/					17			30	M	102/24
★ 2N6367		2	SNP	20	C	36	S	2.0	5.0	0.5	A	50	T	90	9.0/					14			30	M	/211
★ 2N6368		2	SNP	140	C	40	S	8.0	10	1.0	A	50	T	350	40/					10			30	M	/211
2N6369			SNA	220	C	35	O							225											
★ 2N6370		2	SNP	20	C	65	S	1.5	5.0	0.5	A	50	T	40	10/					12			30	M	/211
2N6371			SNA	66.7	C	50	X	16	15	8.0	A									4.0			16	A	66/
2N6372			SNA	22.8	C	90	X	6.0	20	2.0	A									2.0			6.0	A	66/
2N6373			SNA	22.8	C	70	X	6.0	20	2.5	A									2.0			6.0	A	66/
2N6374			SNA	22.8	C	50	X	6.0	20	3.0	A									2.0			6.0	A	66/
D 2N6377			SPG	250	C	80	O	50	30	20	A	30	T	1500	350/1050					1.0			20	A	
D 2N6378			SPG	250	C	100	O	50	30	20	A	30	T	1500	350/1050					1.0			20	A	
D 2N6379		2	SPG	250	C	120	O	50	30	20	A	30	T	1500	350/1050					1.0			20	A	
D 2N6380		2	SPG	250	C	80	O	50	30	20	A	30	T	1500	350/1050					1.2			20	A	63/
D 2N6381		2	SPG	250	C	100	O	50	30	20	A	30	T	1500	350/1050					1.2			20	A	63/
D 2N6382		2	SPG	250	C	120	O	50	30	20	A	30	T	1500	350/1650					1.2			20	A	63/
2N6383			SNA	100	C	40	X	10	1000	5.0	A	20	T	200						2.0			5.0	A	3/
2N6384			SNA	100	C	60	X	10	1000	5.0	A	20	T	200						2.0			5.0	A	3/
2N6385			SNA	100	C	80	X	10	1000	5.0	A	20	T	200						2.0			5.0	A	3/
2N6386			SNA	40	C	40	X	8.0	1000	3.0	A	20	T	200						2.0			3.0	A	220AB/
2N6387			SNA	40	C	80	X	10	1000	5.0	A	20	T	200						2.0			5.0	A	220AB/
2N6388			SNA	40	C	80	X	10	1000	5.0	A	20	T	200						2.0			5.0	A	220AB/
2N6389			SNA	0.2	A	12	O	0.04	25	3.0	m	1000	T												72/20
2N6390			SNH	8.34	C	50	R	1.0	20	50	m			5.0						8.0			2000	M	
2N6391			SNH	8.34	C	50	R	2.5	20	50	m			9.0						7.0			2000	M	
2N6392			SNH	8.34	C	50	R	4.0	20	50	m			11						3.5	2.3		7.0	A	
2N6393			SNH	8.34	C	50	R	4.0	20	50	m			11						3.5	2.3		7.0	A	
★ 2N6406		2	SPA	12.5	C	60	O	2.0	12	1.5	A	50	T	50						2.0	5.0		2.0	A	/77
★ 2N6407		2	SPA	12.5	C	80	O	2.0	12	1.5	A	50	T	50						2.0	5.0		2.0	A	/77
★ 2N6408		2	SNA	12.5	C	60	O	2.0	12	1.5	A	50	T	30						2.0	5.0		2.0	A	/77
★ 2N6409		2	SNA	12.5	C	800	O	2.0	12	1.5	A	50	T	30						2.0	5.0		2.0	A	/77
★ 2N6410		2	SNA	15	C	25	O	4.0	45	2.0	A	50	T	80						1.5	10		4.0	A	/77
★ 2N6411		2	SPA	15	C	25	O	4.0	45	2.0	A	50	T	120						1.5	10		4.0	A	/77
★ 2N6412		2	SNA	15	C	40	O	4.0	20	2.0	A	50	T	50						2.5	5.0		4.0	A	/77
★ 2N6413		2	SNA	15	C	60	O	4.0	20	2.0	A	50	T	50						2.5	5.0		4.0	A	/77
★ 2N6414		2	SPA	15	C	40	O	4.0	20	2.0	A	50	T	70						2.5	5.0		4.0	A	/77
★ 2N6415		2	SPA	15	C	60	O	4.0	20	2.0	A	50	T	70						2.5	5.0		4.0	A	/77
★ 2N6416		2	SNA	15	C	80	O	3.0	20	1.0	A	40	T	50						2.0	10		2.0	A	/77
★ 2N6417		2	SNA	15	C	100	O	3.0	20	1.0	A	40	T	50						2.5	10		2.0	A	/77
★ 2N6418		2	SPA	15	C	80	O	3.0	20	1.0	A	40	T	70						2.5	10		2.0	A	/77
★ 2N6419		2	SPA	15	C	100	O	3.0	20	1.0	A	40	T	70						2.5	10		2.0	A	/77

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	t_{on} ns Max	ΔV_{BE} mV Max	t_{off} ns Max	Gp dB Min	NF dB Max	$V_{CE(sat)}$ Volts Max	@ I_C/I_B	@ f & I_C	Unit	PACKAGE To-Case No.
★ 2N6420			SPA	35 C		175 O		1.0	40	500 m	10 T									5.0	8.0	1.0 A		66/80
★ 2N6421			SPG	35 C		250 O		2.0	8	1.0 A	10 T				3000/7000					.75	8	1.0 A		66/80
★ 2N6422			SPG	35 C		300 O		2.0	8	1.0 A	10 T				3000/7000					.75	8	1.0 A		66/80
★ 2N6423			SPG	35 C		300 O		2.0	10	750 A	15 T				500/9000					1.0	10	750 m		66/80
★ 2N6424		2	SPA	20 C		225 O		0.25	40	100 m	10 T		20							2.5	10	250 m		66/80
★ 2N6425		2	SPA	20 C		300 O		0.25	40	100 m	10 T		20							2.5	10	250 m		66/80
★ 2N6426		2	SNE	.625 A		40 O		0.5	30K	100 m	150 T		7.0								10	AUD		92/29
★ 2N6427		2	SNE	.625 A		40 O		0.5	30K	100 m	150 T		7.0								10	AUD		92/29
2N6436		2	SPG	200 C		80 O		25	20	10 A	40 T		700		300/1250									3/
2N6437		2	SPG	200 C		100 O		25	20	10 A	40 T		700		300/1250									3/
2N6438		2	SPG	200 C		120 O		25	20	10 A	40 T		700		300/1250									3/
2N6439			SNP	140 C		60 S							75		60/			7.8				400 M		
★ 2N6441		2	SNM	0.55 A		45 O		0.05	60	10 U	160 T		1.5		/10							10 K		78/654
★ 2N6442		2	SNM	0.55 A		45 O		0.05	120	10 U	160 T		1.5		/10							10 K		78/654
★ 2N6443		2	SNM	0.55 A		45 O		0.05	60	10 U	160 T		1.5		/5							10 K		78/654
★ 2N6444		2	SNM	0.55 A		45 O		0.05	120	10 U	160 T		1.5		/5							10 K		78/654
★ 2N6445		2	SNM	0.55 A		45 O		0.05	60	10 U	160 T		1.5		/3							10 K		78/654
★ 2N6446		2	SNM	0.55 A		45 O		0.05	120	10 U	160 T		1.5		/3							10 K		78/654
★ 2N6447		2	SNM	0.55 A		45 O		0.05	60	10 U	160 T		1.5		/3							10 K		78/654
★ 2N6448		2	SNM	0.55 A		45 O		0.05	120	10 U	160 T		1.5		/3							10 K		78/654
★ 2N6449			FET	Table 9																				
★ 2N6455			SNP	60 C		45 S		7.0	10	2.0 A	75 T		90		20/			15				30 M		
★ 2N6456			SNP	75 C		45 S		12	10	4.0 A	60 T		180		45/			14				30 M		
★ 2N6457			SNP	140 C		45 S		20	10	4.0 A	50 T		360		75/			13				30 M		
★ 2N6458			SNP	75 C		45 S		7.0	10	2.0 A	75 T		90		20/			15				30 M		
★ 2N6459			SNP	120 C		45 S		12	10	4.0 A	60 T		180		45/			14				30 M		
★ 2N6460			SNP	140 C		45 S		20	10	4.0 A	50 T		360		75/			13				30 M		
2N6461			SNA	1.0 A		300 O		0.1	30	20 m	20 T		70											39/
2N6463			SNA	1.0 A		250 O		0.1	30	20 m	20 T		70											39/
2N6464			SNA	1.0 A		250 O		0.1	100	20 m	20 T		70											39/
★ 2N6467			SPA	23.2 C		100 O		4.0	15	1.5 A	5.0 T									4.0	5.0	4.0 A		66/
★ 2N6468			SPA	23.2 C		120 O		4.0	15	1.5 A	5.0 T									4.0	5.0	4.0 A		66/
★ 2N6469			SPA	71.5 C		40 O		15	20	5.0 A	10 T									3.5	3.0	15 A		3/
★ 2N6470			SNA	71.5 C		40 O		15	20	5.0 A	5.0 T									3.5	3.0	15 A		3/
★ 2N6471			SNA	71.5 C		60 O		15	20	5.0 A	5.0 T									3.5	3.0	15 A		3/
★ 2N6472			SNA	71.5 C		80 O		15	20	5.0 A	5.0 T									3.5	3.0	15 A		3/
2N6473			SNA	16 C		100 O		4.0	15	1.5 A	4.0 T									2.5	2.0	4.0 A		220AB/
2N6474			SNA	16 C		120 O		4.0	15	1.5 A	4.0 T									2.5	2.0	4.0 A		220AB/
2N6475			SPA	16 C		100 O		4.0	15	1.5 A	10 T									2.5	2.0	4.0 A		220AB/
2N6476			SPA	16 C		120 O		4.0	15	1.5 A	10 T									2.5	2.0	4.0 A		220AB/
2N6477			SNA	20 C		120 O		2.5	25	1.0 A	0.2 T									2.0	5.0	2.5 A		220AB/
2N6478			SNA	20 C		140 O		2.5	25	1.0 A	0.2 T									2.0	5.0	2.5 A		220AB/
2N6479			SNG	50 C		60 O		12	20	12 A	100 T				400/1000					.75	10	12 A		
2N6480			SNG	50 C		80 O		12	20	12 A	100 T				400/1000					.75	10	12 A		
2N6481			SNG	67 C		60 O		12	20	12 A	100 T				400/1000					.75	10	12 A		
2N6482			SNG	67 C		80 O		12	20	12 A	100 T				400/1000					.75	10	12 A		
2N6483	THRU		FET	Table 9																				
2N6485			FET	Table 9																				
2N6486			SNA	30 C		40 O		15	20	5.0 A	5.0 T									3.5	3.0	15 A		220AB/
2N6487			SNA	30 C		60 O		15	20	5.0 A	5.0 T									3.5	3.0	15 A		220AB/
2N6488			SNA	30 C		80 O		15	20	5.0 A	5.0 T									3.5	3.0	15 A		220AB/
2N6489			SPA	30 C		40 O		15	20	5.0 A	5.0 T									3.5	3.0	15 A		220AB/
2N6490			SPA	30 C		60 O		15	20	5.0 A	5.0 T									3.5	3.0	15 A		220AB/
2N6491			SPA	30 C		80 O		15	20	5.0 A	5.0 T									3.5	3.0	15 A		220AB/
★ 2N6492			SNA	100 C		45 O		15	100	10 A	0.4 T									3.5	50	10 A		3/1
★ 2N6493			SNA	100 C		70 O		15	100	10 A	0.4 T									3.5	50	10 A		3/1
★ 2N6494			SNA	100 C		80 O		15	100	10 A	0.4 T									3.5	50	10 A		3/1
★ 2N6495			SNS	70 C		80 O		10	10	10 A	25 T				350/350					1.5	10	10 A		66/80
2N6496			SNG	80 C		110 O		15	12	8.0 A	60 T				500/2000					1.0	10	8.0 A		3/
★ 2N6497		2	SNG	80 C		250 O		5.0	10	2.5 A	5.0 T		150		800/2600					5.0	2.5	5.0 A		/199
★ 2N6498		2	SNG	80 C		300 O		5.0	10	2.5 A	5.0 T		150		800/2600					5.0	2.5	5.0 A		/199
★ 2N6499		2	SNG	80 C		350 O		5.0	10	2.5 A	5.0 T		150		800/2600					5.0	2.5	5.0 A		/199
2N6925			THY	Table 6																				
3N22			NA			15 B																		
3N25			FET	Table 9																				
3N25A			FET	Table 9																				
3N34			SNA	.125		30 B																		
3N35			SNA	.125		30 O																		
3N35A			SNE	.125		30 O																		
★ 3N39	THRU		RA															19	14					12/

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C @ I_B & I_C	Unit	PACKAGE To-Case No.
★ 3N44A	TABLE 1		RA																	
3N45			GPA	75	C	35			30	5.0 A		0.6	T							15/
3N46			GPA	75	C	50			20	5.0 A		0.3	T							15/
3N47			GPA	75	C	25			30	5.0 A		0.5	T							
3N48			GPA	75	C	40			20	5.0 A		0.3	T							
3N49			GPA	94	C	35			30	5.0 A		0.6	T							
3N50			GPA	94	C	50			20	5.0 A		0.3	T							
3N51			GPA	94	C	25			30	5.0 A		0.5	T							
3N52			GPA	94	C	40			20	5.0 A		0.3	T							
3N62			SNC	0.1	A	6	I	0.01						5.0	*250/250*		*0.2*		*2.0 m*	72/
3N63			SNC	0.1	A	6	I	0.01						5.0	*250/250*		*0.1*		*2.0 m*	1/
3N64			SNC	0.1	A	6	I	0.01						5.0	*250/250*		*.05*		*2.0 m*	72/
3N65			SNC	0.1	A	6	I	0.01						5.0	*250/250*		*0.2*		*2.0 m*	72/
3N66			SNC	0.1	A	6	I	0.01						5.0	*250/250*		*0.1*		*2.0 m*	72/
3N67			SNC	0.1	A	6	I	0.01						5.0	*250/250*		*.05*		*2.0 m*	72/
3N68			SNC	0.1	A	6	I	0.01						5.0	*250/250*		*0.2*		*2.0 m*	72/
3N68A			SNA	0.1	A	10	B													
3N69			SNC	0.1	A	6	I	0.01						5.0	*250/250*		*0.1*		*2.0 m*	72/
3N70			SNC	0.1	A	6	I	0.01						5.0	*250/250*		*.05*		*2.0 m*	72/
3N71			SNC	0.1		8.0	O		40	2.0 m		100	T							
3N72			SNC	0.1		8.0	O		40	2.0 m		100	T							
3N73			SNC	0.1		8.0	O		40	2.0 m		100	T							
3N74			SNC	0.3		50	B					30	T							
3N75			SNC	0.3		50	B					30	T							
3N76			SNC	0.3		50	B					30	T							
3N77			SNC	0.3		40	B					30	T							
3N78			SNC	0.2		40	B					30	T							
3N79			SNC	0.3		40	B					30	T							
3N80	THRU		THY	Table 6																
3N86			THY	Table 6																
3N87			SNC	0.2	A	10	O		5.0	0.5 m		100	T							
3N88			SNC	0.2	A	10	O		5.0	0.5 m		100	T							
3N89			FET	Table 9																
3N91			SPC	0.3	A	50	B					6.0	T							
3N92			SPC	0.3	A	50	B					6.0	T							
3N93			SPC	0.3	A	50	B					6.0	T							
3N94			SPC	0.3	A	50	B					6.0	T							
3N95			SPC	0.3	A	50	B					6.0	T							
3N100			SPC	0.3	A	20	B													
3N101			SPC	0.3	A	30	B													
3N102			SPC	0.3	A	40	B													
3N103			SPC	0.3	A	50	B													
3N104			SPC	0.3	A	60	B													
3N105			SPC	0.3	A	20	B													
3N106			SPC	0.3	A	40	B													
3N107			SPC	0.3	A	60	B													
3N108			SPC	0.3	A	50	B					12	T							
3N109			SPC	0.3	A	50	B					12	T							
3N110			SPC	0.3	A	50	B					12	T							
3N111			SPC	0.3	A	50	B					12	T							
3N112			SPC	0.2	A	50	B													
3N113			SPC	0.2	A	50	B					12	T							
3N114			SPC	0.3	A	30	B					12	T							
3N115			SPC	0.3	A	30	B					12	T							
3N116			SPC	0.3	A	30	B					12	T							
3N117			SPC	0.3	A	50	B					12	T							
3N118			SPC	0.3	A	50	B					12	T							
3N119			SPC	0.3	A	50	B					12	T							
3N120			SNC	0.2	A	30	B													
3N121			SNC	0.2	A	30	B					40								
3N123			SPC	0.1	A	30	B					6.0M	E							
3N124	THRU		FET	Table 9																
3N126			FET	Table 9																
3N129			SPC	0.3	A	20	B	0.02				2.0M	E	10						72/
3N130			SPC	0.3	A	30	B	0.02				2.0M	E	10						/72
3N131			SPC	0.3	A	40	B	0.02				2.0M	E	10						72/
3N132			SPC	0.3	A	50	B	0.02				2.0M	E	10						72/
3N133			SPC	0.3	A	60	B	0.02				2.0M	E	10						72/
3N134			SPC	0.3	A	20	B	0.02				2.0M	E	12						72/
3N135			SPC	0.3	A	40	B	0.02				2.0M	E	12						72/

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C @ I_B	I_C	Unit	PACKAGE To- No.	Case No.
3N136			SPC	0.3	A	60	B	0.02				2.0M	E	12							72/	
3N138	THRU		FET	Table	9																	
3N143			FET	Table	9																	
3N145	THRU		FET	Table	9																	
3N186			FET	Table	9																	
3N188			FET	Table	9																	
3N191	THRU		FET	Table	9																	
3N193			FET	Table	9																	
3N203A			FET	Table	9																	
3N206	THRU		FET	Table	9																	
3N211			FET	Table	9																	
3N213			FET	Table	9																	
3N214			FET	Table	9																	
3N218			FET	Table	9																	
3N219			OPT	Table	10																	
3N220			OPT	Table	10																	
3N221			THY	Table	6																	
3N222			THY	Table	6																	
★ 4N22	THRU		OPT	Table	10																	
★ 4N32			OPT	Table	10																	
★ BU105			SNA	10	C	750	R	2.5				7.5	*	65*			5.0		2.5	A	/11	
★ BU108		3	SNA	56	C	750	O	5.0				7.5	*	125*							/11	
★ MA200			GPA	0.15	A	105	O	0.2	20	5.0	m						.35		5.0	m		
★ MA201			GPA	0.15	A	105	O	0.2	20	5.0	m						.35		5.0	m	5/31	
★ MA202		3	GPA	0.15	A	105	O	0.2	40	5.0	m						.35		5.0	m	5/31	
★ MA203			GPA	0.15	A	105	O	0.2	40	5.0	m						.35		5.0	m	5/31	
★ MA204			GPA	0.15	A	90	O	0.2	20	5.0	m						.35		5.0	m	5/31	
★ MA205			GPA	0.15	A	75	O	0.2	20	5.0	m						.35		5.0	m	5/31	
★ MA206		3	GPA	0.15	A	60	O	02	20	5.0	m						.35		5.0	m	5/31	
★ MA909			GPA	0.15	C	75	O	0.2	20	5.0	m										5/31	
★ MA910			GPA	0.15	C	90	O	0.2	20	5.0	m										5/31	
★ MA4404		3	GPG	0.2	A	24	S	0.35	30	12	m			25	530/1700						5/31	
★ MA4404A		3	GPA	2	A	35	S	0.35	30	12	m			25							5/31	
★ MD708		3	SNG	0.55	A	15	O	0.2	40	10	m	300	T	5.0	35/75		.20	10	10	m	/654	
★ MD708A		3	SNM	0.55	A	15	O	0.2	40	10	m	300	T	5.0	/10		.20		10	m	/654	
★ MD708AF		3	SNM	0.35	A	15	O	0.2	40	10	m	300	T	5.0	/10		.20		10	m	/610	
★ MD708B		3	SNM	0.55	A	15	O	0.2	40	10	m	300	T	5.0	/20		.20		10	m	/654	
★ MD708BF		3	SNM	0.35	A	15	O	0.2	40	10	m	300	T	5.0	/20		.20		10	m	/610	
★ MD708F		3	SNG	0.35	A	15	O	0.2	40	10	m	300	T	5.0	35/75		.20	10	10	m	/610	
★ MD918		3	SNA	0.55	A	15	O	0.05	50	3.0	m	600	T	1.7				6.0	60	M	/654	
★ MD918A		3	SNM	0.55	A	15	O	0.05	50	3.0	m	600	T	1.7	/10				60	M	/654	
★ MD918AF		3	SNM	0.35	A	15	O	0.05	50	3.0	m	600	T	1.7	/20				60	M	/610	
★ MD918B		3	SNM	0.55	A	15	O	0.05	50	3.0	m	600	T	1.7	/20				60	M	/654	
D MD918BF		3	SNM	0.35	A	15	O	0.05	50	3.0	m	600	T	1.7	/20				60	M	/610	
★ MD918F		3	SNA	0.35	A	15	O	0.05	50	3.0	m	600	T	1.7				6.0	60	M	/610	
★ MD982		3	SPA	0.6	A	50	O	0.6	40	150	m	200	T	8.0			.5		150	m	/654	
★ MD982F		3	SPA	0.35	A	50	O	0.6	40	150	m	200	T	8.0							/610	
★ MD984		3	SPA	.575	A	20	O	0.2	25	10	m	250	T				0.5	10	50	m	/654	
★ MD985		3	SCG	.575	A	30	O	0.5	40	150	m	200	T	8.0	25/75		0.5	10	150	m	/654	
★ MD985F		3	SCG	0.35	A	30	O	0.5	40	150	m	200	T	8.0	25/75		0.5	10	150	m	/610	
★ MD986		3	SCA	0.55	A	15	O	0.2	25	10	m	200	T	4.0			0.3	10	10	m	/654	
★ MD986F		3	SCA	0.35	A	15	O	0.2	25	10	m	200	T	4.0			0.3	10	10	m	/610	
★ MD1120		3	SNM	.575	A	30	O	0.5	50	10	m	200	T	8.0	/10		10		10	m	/654	
★ MD1120F		3	SNA	0.35	A	30	O	0.5	50	10	m	200	T	8.0	0.8/10		10	10	10	m	/610	
★ MD1121		3	SNM	.575	A	30	O	0.5	50	10	m	200	T	8.0	/10		10		10	m	/654	
★ MD1122		3	SNM	.575	A	30	O	0.5	50	10	m	200	T	8.0	/5.0		10		10	m	/654	
★ MD1123		3	SPM	.575	A	40	O	0.2	30	100	u	250	T	4.0	/10		.25		10	m	/654	
★ MD1129		3	SNM	.575	A	30	O	0.5	100	10	m	200	T	8.0	/5.0		.1		10	m	/654	
★ MD1129F		3	SNA	0.35	A	30	O	0.5	100	10	m	200	T	8.0	0.9/5.0		.15	10	10	m	/610	
★ MD1130		3	SPM	.575	A	40	O	0.2	100	100	u	200	T	4.0	/5.0		.25		10	m	/654	
★ MD1130F		3	SPM	0.35	A	40	O	0.2	100	100	u	200	T	4.0	/5.0		.25		10	m	/610	
★ MD1132			SNM	0.3	A	15	O	0.05	50	1.0	m	600	T	1.7	/10		.4		10	m	/654	
★ MD2218		3	SNA	.575	A	30	O	0.5	40	150	m	200	T	8.0	60/340		.4	10	150	m	/654	
★ MD2218A		3	SNA	.575	A	30	O	0.5	40	150	m	200	T	8.0	45/310		.4	10	150	m	/654	
★ MD2218AF		3	SNA	0.35	A	30	O	0.5	40	150	m	200	T	8.0	45/310		.3	10	150	m	/610	
★ MD2218F		3	SNA	0.35	A	30	O	0.5	40	150	m	200	T	8.0	60/340		.4	10	150	m	/610	
★ MD2219		3	SNA	.575	A	30	O	0.5	100	150	m	200	T	8.0	60/340		.4	10	150	m	/654	
★ MD2219A		3	SNA	.575	A	30	O	0.5	100	150	m	200	T	8.0	45/310		.4	10	150	m	/654	
★ MD2219AF		3	SNA	.350	A	30	O	0.5	100	150	m	200	T	8.0	45/310		.3	10	150	m	/610	
★ MD2219F		3	SNA	.350	A	30	O	0.5	100	150	m	200	T	8.0	60/340		.4	10	150	m	/610	

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF @ f dB Max	Unit	PACKAGE To- No.	Case No.
														t_{on} ns Max	t_{off} ns Max	$V_{CE(sat)}$ Volts Max	I_C/I_B & I_C			
★ MD2369		3	SNS	0.55 A		15	0	0.5	40	10 m	500	T	4.0	*15/20*		.25	10	10 m	/654	
★ MD2369A		3	SNM	0.55 A		15	0	0.5	40	10 m	500	T	4.0	/5.0		.25		10 m	/654	
★ MD2369AF		3	SNM	0.35 A		15	0	0.5	40	10 m	500	T	4.0	/5.0		.25		10 m	/610	
★ MD2369B		3	SNM	0.55 A		15	0	0.5	40	10 m	500	T	4.0	/10		.25		10 m	/654	
★ MD2369BF		3	SNM	0.35 A		15	0	0.5	40	10 m	500	T	4.0	/10		.25		10 m	/610	
★ MD2369F		3	SNS	0.35 A		15	0	0.5	40	10 m	500	T	4.0	*15/20*		.25	10	10 m	/610	
★ MD2904		3	SPG	.575 A		40	0	0.6	40	150 m	200	T	8.0	*45/130*		.4		150 m	/654	
★ MD2904A		3	SPG	.575 A		60	0	0.6	40	150 m	200	T	8.0	*45/130*		.4		150 m	/654	
★ MD2904AF		3	SPG	.350 A		60	0	0.6	40	150 m	200	T	8.0	*45/130*		.4		150 m	/610	
★ MD2904F		3	SPG	.350 A		40	0	0.6	40	150 m	200	T	8.0	*45/130*		.4		150 m	/610	
★ MD2905		3	SPG	.575 A		40	0	0.6	100	150 m	200	T	8.0	*45/130*		.4		150 m		
★ MD2905A		3	SPG	.575 A		60	0	0.6	100	150 m	200	T	8.0	*45/130*		.4		150 m		
★ MD2905AF		3	SPG	0.35 A		60	0	0.6	100	150 m	200	T	8.0	*45/130*		.4		150 m		
★ MD2905F		3	SPG	0.35 A		40	0	0.6	100	150 m	200	T	8.0	*45/130*		.4		150 m		
★ MD3250		3	SPA	.575 A		40	0	0.05	50	1.0 m	200	T	6.0			.25	10	10 m	/654	
★ MD3250A		3	SPM	.575 A		40	0	0.05	50	1.0 m	200	T	6.0	/1.0		.25		10 m	/654	
★ MD3250AF		3	SPM	0.35 A		40	0	0.05	50	1.0 m	200	T	6.0	/1.0		.25		10 m	/610	
★ MD3250F		3	SPA	0.35 A		40	0	0.05	50	1.0 m	200	T	6.0			.25	10	10 m	/610	
★ MD3251		3	SPA	.575 A		40	0	0.05	100	1.0 m	250	T	6.0			.25	10	10 m	/654	
★ MD3251A		3	SPM	.575 A		40	0	0.05	100	1.0 m	250	T	6.0	/1.0		.25		10 m	/654	
★ MD3251AF		3	SPA	0.35 A		40	0	0.05	100	1.0 m	250	T	6.0				3.0	AUD	/610	
★ MD3251F		3	SPA	0.35 A		40	0	0.05	100	1.0 m	250	T	6.0			.25	10	10 m	/610	
★ MD3409		3	SNA	.575 A		30	0	0.5	50	10 m	200	T	8.0			.15		10 m	/654	
★ MD3410		3	SNA	.575 A		30	0	0.5	50	10 m	200	T	8.0			.15		10 m	/654	
★ MD3467		3	SPG	0.60 A		40	0	1.5	20	500 m	150	T	20	*40/110*		0.5	10	500 m	/654	
★ MD3467F		3	SPG	0.35 A		40	0	1.5	20	500 m	150	T	20	*40/110*		0.5	10	500 m	/610	
★ MD3725		3	SNG	0.60 A		40	0	1.0	50	100 m	200	T	10	*45/75*		.26	10	100 m	/654	
★ MD3725F		3	SNG	0.35 A		40	0	1.0	50	100 m	200	T	10	*45/75*		.26	10	100 m	/610	
★ MD3762		3	SPG	0.60 A		40	0	1.5	20	1.0 A	150	T	20	*40/110*		1.0	10	1.0 A	/654	
★ MD3762F		3	SPG	0.35 A		40	0	1.5	20	1.0 A	150	T	20	*40/110*		1.0	10	1.0 A	/610	
★ MD4957		3	SPA	0.2 A		30	0	0.03	20	2.0 m	1.0					18	2.6	450 M	/654	
★ MD5000		3	SPA	0.3 A		15	0	0.05	20	3.0 m	600	T	1.7			.4		10 m	/654	
★ MD5000A		3	SPA	0.3 A		15	0	0.05	20	3.0 m	600	T	1.7			.4		10 m	/654	
★ MD5000B		3	SPA	0.3 A		15	0	0.05	20	3.0 m	600	T	1.7			15	6.0	200 M	/654	
★ MD6001		3	SCG	.575 A		30	0	0.5	40	150 m	200	T	8.0	*60/350*		0.4	10	150 m	/654	
★ MD6001F		3	SCG	0.35 A		30	0	0.5	40	150 m	200	T	8.0	*60/350*		0.4	10	150 m	/610	
★ MD6002		3	SCG	.575 A		30	0	0.5	100	150 m	200	T	8.0	*60/350*		0.4	10	150 m	/654	
★ MD6002F		3	SCG	0.35 A		30	0	0.5	100	150 m	200	T	8.0	*60/350*		0.4	10	150 m	/610	
★ MD6003		3	SCG	.575 A		30	0	0.5	70	150 m	200	T	8.0	*60/350*		0.4	10	150 m	/654	
★ MD6003F		3	SCG	0.35 A		30	0	0.5	70	150 m	200	T	8.0	*60/350*		0.4	10	150 m	/610	
★ MD6100			SCA	0.5 A		45	0	0.05	100	0.1 m	30	T	4.0				4.0	AUD	/654	
★ MD7000		3	SNA	.575 A		30	0	0.5	70	150 m	200	T	8.0						/654	
★ MD7001		3	SPA	0.6 A		30	0	0.6	70	150 m	200	T	8.0						/654	
★ MD7001F		3	SPA	.350 A		30	0	0.6	70	150 m	200	T	8.0						/610	
★ MD7002		3	SNA	.575 A		40	0	0.03	40	100 u	200	T	6.0			.35	10	10 m	/654	
★ MD7002A		3	SNM	.575 A		40	0	0.03	40	100 u	200	T	6.0	/25		.35		10 m	/654	
★ MD7002B		3	SNM	.575 A		40	0	0.03	40	100 u	200	T	6.0	/15		.35		10 m	/654	
★ MD7003		3	SNA	0.55 A		40	0	0.05	50	10 m	200	T	6.0			.35	10	1.0 m	/654	
★ MD7003A		3	SNM	0.55 A		40	0	0.05	50	10 m	200	T	6.0	/25		.35		1.0 m	/654	
★ MD7003AF		3	SNM	0.35 A		40	0	0.05	50	10 m	200	T	6.0	/25		.35		1.0 m	/610	
★ MD7003B		3	SNM	0.55 A		40	0	0.05	50	10 m	200	T	6.0	/15		.35		1.0 m	/654	
★ MD7003F		3	SNA	0.35 A		40	0	0.05	50	10 m	200	T	6.0			.35	10	1.0 m	/610	
★ MD7004		3	SNA	0.55 A		13	0	0.2	30	10 m	675*	T	4.0			0.4	10	10 m	/654	
★ MD7004F		3	SNA	0.35 A		13	0	0.2	30	10 m	675*	T	4.0			0.4	10	10 m	/610	
★ MD7005			SPE	0.55 A		12	0	0.05	30	3.0 m	650	T	3.0			.4	10	10 m	/32	
★ MD7007			SNA	.575 A		40	0	0.2	30	1.0 m	300	T	8.0			1.0	10	50 m	/654	
★ MD7007A		3	SNM	.575 A		40	0	0.2	30	1.0 m	300	T	8.0	/20		1.0		50 m	/654	
★ MD7007B		3	SNM	.575 A		40	0	0.2	30	1.0 m	300	T	8.0	/10		1.0		50 m	/654	
★ MD7007BF			SNA	0.35 A		40	0	0.2	30	1.0 m	300	T	8.0			1.0	10	50 m	/610	
★ MD7007F		3	SNA	0.35 A		40	0	0.2	30	1.0 m	300	T	8.0			1.0	10	50 m	/610	
★ MD7021		3	SCG	0.55 A		40	0	0.05	50	10 m	200	T	6.0	*28*/72**		.35	10	10 m	/654	
★ MD7021F		3	SCG	0.35 A		40	0	0.05	50	10 m	200	T	6.0	*28*/72**		.35	10	10 m	/610	
★ MD8001		3	SNM	.575 A		40	0	0.03	100	1.0 m	260*	T	2.6*	/15					/654	
★ MD8002		3	SNM	.575 A		50	0	0.03	100	1.0 m	260*	T	2.6*	/15					/654	
★ MD8003		3	SNM	.575 A		60	0	0.03	100	1.0 m	260*	T	2.6*	/15					/654	
★ MHQ918		3	SNF	0.65 A		15	0	0.05	20	3.0 m	600	T	1.7				2.5	60 M	116/632	
★ MHQ2221		3	SNG	0.65 A		40	0	0.5	40	150 m	200	T	8.0	*25/250*		.4		150 m	116/632	
★ MHQ2222		3	SNG	0.65 A		40	0	0.5	100	150 m	200	T	8.0	*25/250*		.4		150 m	116/632	
★ MHQ2369		3	SNA	0.5 A		15	0	0.5	40	10 m	450	T	4.0			.25		10 m	116/632	
★ MHQ2483		3	SNA	0.6 A		40	0	0.05	150	1.0 m	50	T					3.0	AUD	116/632	

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TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / @ I_C / I_B & I_C	Unit	PACKAGE To-Case No. No.
★ MHQ2484		3	**SNA**	0.6 A		40 0		0.05	300	1.0 m	50 T						2.0	**AUD**	116/632
★ MHQ2906		3	**SPA**	0.65 A		40 0		0.6	40	150 m	200 T		8.0	*30/100**		.4		*150 m*	116/632
★ MHQ2907		3	**SPA**	0.65 A		40 0		0.6	100	150 m	200 T		8.0	*30/100**		.4		*150 m*	116/632
★ MHQ3467		3	**SPG**	0.9 A		40 0		1.0	20	500 m	125 T		25	*40/90*		.5		*500 m*	116/632
★ MHQ3546		3	**SPA**	0.5 A		12 0		0.2	30	10 m	600 T		6.0	*15/25**		.25		*100 m*	116/632
★ MHQ3798		3	**SPA**	0.5 A		40 0		0.05	150	0.1 m	60 T		4.0				2.5	**AUD**	116/632
★ MHQ3799		3	**SPA**	0.5 A		60 0		0.05	300	0.1 m	60 T		4.0				1.5	**AUD**	116/632
★ MHQ4001A		3	**SNS**	0.75 A		40 0		1.5	30	500 m	200 T		10	*40/75*		.95	*10*	*1.0 A*	116/632
★ MHQ4002A		3	**SNS**	0.75 A		45 0		1.5	30	500 m	200 T		10	*40/75*		.95	*10*	*1.0 A*	116/632
★ MHQ4013		3	SNG	0.75 A		40 0		1.5	60	100 m	200 T		10	*35/60*		.26	*10*	*100 m*	116/632
★ MHQ4014		3	SNG	0.75 A		45 0		1.5	60	100 m	200 T		10	*35/60*		.26	*10*	*100 m*	116/632
★ MHQ6001		3	**SCA**	0.65 A		30 0		0.3	40	150 m	200 T		8.0	*30/315**		.4		*150 m*	116/632
★ MHQ6002		3	**SCA**	0.65 A		30 0		0.3	100	150 m	200 T		8.0	*30/315**		.4		*150 m*	116/632
★ MHQ6100		3	**SCA**	0.5 A		40 0		0.05	75	1.0 m	175 *		4.5*			.25		*1.0 m*	116/632
★ MHQ6100A		3	**SCA**	0.5 A		45 0		0.05	150	1.0 m	175 *		4.5*			.25		*1.0 m*	116/632
MHW601			SNP											**13/**		**21**			/297
MHW602			SNP											**20/**		**21**			/297
★ MJE105		3	SPA	65 C		50 0		5.0	25	2.0 A									/90
★ MJE105K		3	SPA	65 C		50 0		5.0	25	2.0 A									/199
★ MJE170		3	SPA	12.5 C		40 0		3.0	50	100 m	50 T		50			.3		*500 m*	/77
★ MJE171		3	SPA	12.5 C		60 0		3.0	50	100 m	50 T		50			.3		*500 m*	/77
★ MJE172		3	SPA	12.5 C		80 0		3.0	50	100 m	50 T		50						/77
★ MJE180		3	SNA	12.5 C		40 0		3.0	50	100 m	50 T		30						/77
★ MJE181		3	SNA	12.5 C		60 0		3.0	50	100 m	50 T		30						/77
★ MJE182		3	SNA	12.5 C		80 0		3.0	50	100 m	50 T		30						/77
★ MJE200		3	SNA	15 C		25 0		5.0	45	2.0 A	65 T		80			.75		*2.0 A*	/77
★ MJE205		3	SNA	65 C		50 0		5.0	25	2.0 A									/90
★ MJE205K		3	SNA	65 C		50 0		5.0	25	2.0 A									/199
★ MJE210		3	SPA	15 C		25 0		5.0	45	2.0 A	65 T		120			.75		*2.0 A*	/77
★ MJE220		3	SNA	15 C		40 0		4.0	40	200 m	50 T		50			.3		*500 m*	/77
★ MJE221		3	SNA	15 C		40 0		4.0	40	200 m	50 T		50			.3		*500 m*	/77
★ MJE222		3	SNA	15 C		40 0		4.0	25	200 m	50 T		50			.3		*500 m*	/77
★ MJE223		3	SNA	15 C		60 0		4.0	40	200 m	50 T		50			.3		*500 m*	/77
★ MJE224		3	SNA	15 C		60 0		4.0	40	200 m	50 T		50			.3		*500 m*	/77
★ MJE225		3	SNA	15 C		60 0		4.0	25	200 m	50 T		50			.3		*500 m*	/77
★ MJE230		3	SPA	15 C		40 0		4.0	40	200 m	50 T		70			.3		*500 m*	/77
★ MJE231		3	SPA	15 C		40 0		4.0	40	200 m	50 T		70			.3		*500 m*	/77
★ MJE232		3	SPA	15 C		40 0		4.0	25	200 m	50 T		70			.3		*500 m*	/77
★ MJE233		3	SPA	15 C		60 0		4.0	40	200 m	50 T		70			.3		*500 m*	/77
★ MJE234		3	SPA	15 C		60 0		4.0	40	200 m	50 T		70			.3		*500 m*	/77
★ MJE235		3	SPA	15 C		60 0		4.0	25	200 m	50 T		70			.3		*500 m*	/77
★ MJE240		3	SNA	15 C		80 0		4.0	40	200 m	40 T		50			.3		*500 m*	/77
★ MJE241		3	SNA	15 C		80 0		4.0	40	200 m	40 T		50			.3		*500 m*	/77
★ MJE242		3	SNA	15 C		80 0		4.0	25	200 m	40 T		50			.3		*500 m*	/77
★ MJE243		3	SNA	15 C		100 0		4.0	40	200 m	40 T		50			.3		*500 m*	/77
★ MJE244		3	SNA	15 C		100 0		4.0	25	200 m	40 T		50			.3		*500 m*	/77
★ MJE250		3	SPA	40 C		80 0		4.0	40	200 m	40 T		70			.3		*500 m*	/77
★ MJE251		3	SPA	40 C		80 0		4.0	40	200 m	40 T		70			.3		*500 m*	/77
★ MJE252		3	SPA	40 C		80 0		4.0	25	200 m	40 T		70			.3		*500 m*	/77
★ MJE253		3	SPA	15 C		100 0		4.0	40	200 m	40 T		70			.3		*500 m*	/77
★ MJE254		3	SPA	15 C		100 0		4.0	25	200 m	40 T		70			.3		*500 m*	/77
★ MJE340		3	SNA	20.8 C		300 0		0.5	30	50 m									/77
★ MJE340K		3	SNA	3.0 C		300 0		0.5	30	50 m									/199
★ MJE341		3	SNA	20.8 C		150 0		0.5	25	50 m	15 T		15			*1.0*		*150 m*	/77
★ MJE341K		3	SNA	30		150 0		0.5	25	50 m	15 T		15						/199
★ MJE344		3	SNA	20.8 C		200 0		0.5	30	50 m	15 T		15			*1.0*		*150 m*	/77
★ MJE344K		3	SNA	30 C		200 0		0.5	30	50 m	15 T		15						/199
★ MJE350		3	SPA	20 C		300 0		0.5	30	50 m									/77
★ MJE370		3	SPA	25 C		30 0		3.0	25	1.0 A									/77
★ MJE370K		3	SPA	40 C		30 0		3.0	25	1.0 A									/199
★ MJE371		3	SPA	40 C		40 0		4.0	40	1.0 A									/77
★ MJE371K		3	SPA	60 C		40 0		4.0	40	1.0 A									/199
★ MJE520		3	SNA	25 C		30 0		3.0	25	1.0 A									/77
★ MJE520K		3	SNA	40 C		30 0		3.0	25	1.0 A									/199
★ MJE521		3	SNA	40 C		40 0		4.0	40	1.0 A									/77
★ MJE521K		3	SNA	60		40 0		4.0	40	1.0 A									/199
★ MJE700		3	SPA	40 C		60 0		4.0	750	1.5 A						*2.5*		*1.5 A*	/77
★ MJE701		3	SPA	40 C		60 0		4.0	750	2.0 A						*2.8*		*2.0 A*	/77
★ MJE702		3	SPA	40 C		80 0		4.0	750	1.5 A						*2.5*		*1.5 A*	/77
★ MJE703		3	SPA	40 C		80 0		4.0	750	2.0 A						*2.8*		*2.0 A*	/77

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C/I_B & I_C	Unit	PACKAGE To-Case No.
★ MJE710		3	SPA	20	C	40	0	1.5	40	150	m						.15		150	m	/77
★ MJE711		3	SPA	20	C	60	0	1.5	40	150	m						.15		150	m	/77
★ MJE712		3	SPA	20	C	80	0	1.5	40	150	m						.15		150	m	/77
★ MJE720		3	SNA	20	C	40	0	1.5	40	150	m						.15		150	m	/77
★ MJE721		3	SNA	20	C	60	0	1.5	40	150	m						.15		150	m	/77
★ MJE722		3	SNA	20	C	80	0	1.5	40	150	m						.15		150	m	/77
★ MJE800		3	SNA	40	C	60	0	4.0	750	1.5	A						2.5		1.5	A	/77
★ MJE801		3	SNA	40	C	60	0	4.0	750	2.0	A						2.8		2.0	A	/77
★ MJE802		3	SNA	40	C	80	0	4.0	750	1.5	A						2.5		1.5	A	/77
★ MJE803		3	SNA	40	C	80	0	4.0	750	2.0	A						2.8		2.0	A	/77
★ MJE1090		3	SPA	70	C	60	0	5.0	750	3.0	A						2.5		3.0	A	/90
★ MJE1091		3	SPA	70	C	60	0	5.0	750	4.0	A						2.8		4.0	A	/90
★ MJE1092		3	SPA	70	C	80	0	5.0	750	3.0	A						2.5		3.0	A	/90
★ MJE1093		3	SPA	70	C	80	0	5.0	750	4.0	A						2.8		4.0	A	/90
★ MJE1100		3	SNA	70	C	60	0	5.0	750	3.0	A						2.5		3.0	A	/90
★ MJE1101		3	SNA	70	C	60	0	5.0	750	4.0	A						2.8		4.0	A	/90
★ MJE1102		3	SNA	70	C	80	0	5.0	750	3.0	A						2.5		3.0	A	/90
★ MJE1103		3	SNA	70	C	80	0	5.0	750	4.0	A						2.8		4.0	A	/90
★ MJE1290		3	SPA	90	C	40	0	15	20	5.0	A	3.0	T				1.8		15	A	/90
★ MJE1291		3	SPA	90	C	60	0	15	20	5.0	A	3.0	T				1.8		15	A	/90
★ MJE1660		3	SNA	90	C	40	0	15	20	5.0	A	3.0	T				1.8		15	A	/90
★ MJE1661		3	SNA	90	C	60	0	15	20	5.0	A	3.0	T				1.8		15	A	/90
★ MJE2010		3	SPA	80	C	40	0	5.0	25	1.0	A	3.0	T				1.0		3.5	A	/199
★ MJE2011		3	SPA	80	C	60	0	5.0	25	1.0	A	3.0	T				1.0		3.5	A	/199
★ MJE2020		3	SNA	80	C	40	0	5.0	25	1.0	A	3.0	T				1.0		3.5	A	/199
★ MJE2021		3	SNA	80	C	60	0	5.0	25	1.0	A	3.0	T				1.0		3.5	A	/199
★ MJE2050		3	SNA	15	C	45	R	5.0	50	1.8	A										/77
★ MJE2090		3	SPA	70	C	60	0	5.0	750	3.0	m						2.5		3.0	m	/199
★ MJE2091		3	SPA	70	C	60	0	5.0	750	4.0	m						2.8		4.0	m	/199
★ MJE2092		3	SPA	70	C	80	0	5.0	750	3.0	m						2.5		3.0	m	/199
★ MJE2093		3	SPA	70	C	80	0	5.0	750	4.0	m						2.8		4.0	m	/199
★ MJE2100		3	SNA	70	C	60	0	5.0	750	3.0	m						2.5		3.0	m	/199
★ MJE2101		3	SNA	70	C	60	0	5.0	750	4.0	m						2.8		4.0	m	/199
★ MJE2102		3	SNA	70	C	80	0	5.0	750	3.0	m						2.5		3.0	m	/199
★ MJE2103		3	SNA	70	C	80	0	5.0	750	4.0	m						2.8		4.0	m	/199
★ MJE2150		3	SPA	15	C	25	R	5.0	50	1.8	A										/77
★ MJE2160		3	SNA	50	C	300	0	1.5	30	500	m										/199
★ MJE2360		3	SNA	30	C	350	0	0.5	25	50	m	10	T	20			1.5		100	m	/199
★ MJE2361		3	SNA	30	C	350	0	0.5	50	50	m	10	*	20*			1.5		100	m	/199
★ MJE2370		3	SPA	40	C	40	0	3.0	40	0.2	A	3.0	T				.7		1.0	A	/199
★ MJE2371			SPA	40	C	60	0	3.0	40	0.2	A	3.0	T				.7		1.0	A	/199
★ MJE2480		3	SNA	60	C	40	0	4.0	20	1.5	A	2.0	T				.7		1.5	A	/199
★ MJE2481		3	SNA	60	C	60	0	4.0	20	1.5	A	2.0	T				.7		1.5	A	/199
★ MJE2482		3	SNA	60	C	40	0	4.0	20	2.5	A	2.0	T				.7		1.5	A	/199
★ MJE2483		3	SNA	60	C	60	0	4.0	20	2.5	A	2.0	T				.7		1.5	A	/199
★ MJE2490		3	SPA	60	C	40	0	3.0	20	1.0	A	3.0	T				.6		1.0	A	/199
★ MJE2491		3	SPA	60	C	60	0	3.0	20	1.0	A	3.0	T				.6		1.0	A	/199
★ MJE2520		3	SNA	40	C	40	0	3.0	10	1.0	A	3.0	T				.7		1.0	A	/199
★ MJE2521			SNA	40	C	60	0	3.0	10	1.0	A	3.0	T				.7		1.0	A	/199
★ MJE2522			SNA	40	C	40	0	3.0	20	1.0	A	3.0	T				.6		1.0	A	/199
★ MJE2523			SNA	40	C	60	0	3.0	20	1.0	A	3.0	T				.6		1.0	A	/199
★ MJE2801		3	SNA	90	C	60	0	10	25	3.0	A										/90
★ MJE2801K		3	SNA	90	C	60	0	10	25	3.0	A										/199
★ MJE2901		3	SPA	90	C	60	0	10	25	3.0	A										/90
★ MJE2901K		3	SPA	90	C	60	0	10	25	3.0	A										/199
★ MJE2955		3	SPA	90	C	60	0	10	20	4.0	A	2.0	T				1.1		4.0	A	/90
★ MJE2955K		3	SPA	90	C	60	0	10	20	4.0	A	2.0	T								/199
★ MJE3054			SNA	40	C	55	0	4.0	40	0.5	A						1.0		.5	A	/199
★ MJE3055		3	SNA	90	C	60	0	10	20	4.0	A	2.0	T				1.1		4.0	A	/90
★ MJE3055K		3	SNA	90	C	60	0	10	20	4.0	A	2.0	T								/199
★ MJE3370		3	SPA	25	C	30	0	3.0	25	1.0	A										/77
★ MJE3371		3	SPA	40	C	40	0	4.0	40	1.0	A										/77
★ MJE3439		3	SNA	15	C	350	0	0.3	40	20	m	15	T	10			.5		50	m	/77
★ MJE3440		3	SNA	15	C	250	0	0.3	40	20	m	15	T	10			.5		50	m	/77
★ MJE3520		3	SNA	25	C	30	0	3.0	25	1.0	A										/77
★ MJE3521		3	SNA	40	C	40	0	4.0	40	1.0	A										
★ MJE3738		3	SNA	30	C	225	0	0.5	40	100	m	10	*	20*			2.5		250	m	/199
★ MJE3739		3	SNA	30	C	300	0	0.5	40	100	m	10	*	20*			2.5		250	m	/199
★ MJE3740			SPA	40	C	60	0	4.0	30	250	m	4.0	T	100			.6		1.0	A	/199
★ MJE3741			SPA	40	C	80	0	4.0	30	250	m	4.0	T	100			.6		1.0	A	/199

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max @ I_C & I_B	Unit	PACKAGE To-Case No. No.
★ MJE4918		1	SPA	40	C	40	O	1.0	10	1.0 A	3.0	T	100						/199
★ MJE4919		1	SPA	40	C	60	O	1.0	10	1.0 A	3.0	T	100						/199
★ MJE4920		1	SPA	40	C	80	O	1.0	10	1.0 A	3.0	T	100						/199
★ MJE4921		1	SNA	40	C	40	O	1.0	10	1.0 A	3.0	T	100						/199
★ MJE4922		1	SNA	40	C	60	O	1.0	10	1.0 A	3.0	T	100						/199
★ MJE4923		1	SNA	40	C	80	O	1.0	10	1.0 A	3.0	T	100						/199
★ MJE5190		2	SNA	60	C	40	O	4.0	25	1.5 A	2.0	T							/199
★ MJE5191		2	SNA	60	C	60	O	4.0	25	1.5 A	2.0	T							/199
★ MJE5192		2	SNA	60	C	80	O	4.0	20	1.5 A	2.0	T							/199
★ MJE5193		2	SPA	60	C	40	O	4.0	25	1.5 A	2.0	T							/199
★ MJE5194		2	SPA	60	C	60	O	4.0	25	1.5 A	2.0	T							/199
★ MJE5195		2	SPA	60	C	80	O	4.0	20	1.5 A	2.0	T							/199
★ MJE5655		2	SNA	30	C	250	O	0.5	30	100 m	10	T	25						/199
★ MJE5656		2	SNA	30	C	300	O	0.5	30	100 m	10	T	25						/199
★ MJE5657		2	SNA	30	C	350	O	0.5	30	100 m	10	T	25						/199
★ MJE5974		2	SPA	75	C	40	O	5.0	20	2.5 A	2.0	T	300						/199
★ MJE5975		2	SPA	75	C	60	O	5.0	20	2.5 A	2.0	T	300						/199
★ MJE5976		2	SPA	75	C	80	O	5.0	20	2.5 A	2.0	T	300						/199
★ MJE5977		2	SNA	75	C	40	O	5.0	20	2.5 A	2.0	T	200						/199
★ MJE5978		2	SNA	75	C	60	O	5.0	20	2.5 A	2.0	T	200						/199
★ MJE5979		2	SNA	75	C	80	O	5.0	20	2.5 A	2.0	T	200						/199
★ MJE5980		2	SPA	90	C	40	O	8.0	20	4.0 A	2.0	T	350						/199
★ MJE5981		2	SPA	90	C	60	O	8.0	20	4.0 A	2.0	T	350						/199
★ MJE5982		2	SPA	90	C	80	O	8.0	20	4.0 A	2.0	T	350						/199
★ MJE5983		2	SNA	90	C	40	O	8.0	20	4.0 A	2.0	T	250						/199
★ MJE5984		2	SNA	90	C	60	O	8.0	20	4.0 A	2.0	T	250						/199
★ MJE5985		2	SNA	90	C	80	O	8.0	20	4.0 A	2.0	T	250						/199
★ MJE6040		2	SPA	75	C	60	O	8.0	1000	4.0 A	4.0	T	300						/90
★ MJE6041		2	SPA	75	C	80	O	8.0	1000	4.0 A	4.0	T	300						/90
★ MJE6042		2	SPA	75	C	100	O	8.0	1000	3.0 A	4.0	T	300						/90
★ MJE6043		2	SNA	75	C	60	O	8.0	1000	4.0 A	4.0	T	200						/90
★ MJE6044		2	SNA	75	C	80	O	8.0	1000	4.0 A	4.0	T	200						/90
★ MJE6045		2	SNA	75	C	100	O	8.0	1000	3.0 A	4.0	T	200						/90
★ MJ105		3	SNA	10	C	750	R	2.5			7.5	*	65*			5.0		2.5 A	/11
★ MJ400		3	SNA	6.67	C	325	O	0.25	30	50 m	15	T	10*			5.0		50 m	66/80
★ MJ410		3	SNA	100	C	200	O	5.0	30	1.0 A	2.5	T				.8		1.0 A	/11
★ MJ411		3	SNA	100	C	300	O	5.0	30	1.0 A	2.5	T				.8		1.0 A	/11
★ MJ413		3	SNA	125	C	400	X	10	20	500 m	2.5	T				.8		500 m	/11
★ MJ420			SNA	2.5	C	250	O	0.1	25	30 m	15	T	12			5.0		30 m	5/31
★ MJ421			SNA	2.5	C	325	O	0.1	25	30 m	15	T	12			5.0		30 m	5/31
★ MJ423		3	SNA	125	C	400	X	10	30	1.0 A	2.5	T				.8		1.0 A	/11
★ MJ424		3	SNA	100	C	350	O	5.0	30	1.0 A	2.5	T				.8		1.0 A	/11
★ MJ425		3	SNA	100	C	400	O	5.0	30	1.0 A	2.5	T				.8		1.0 A	/11
★ MJ431		3	SNA	125	C	400	X	10	15	2.5 A	2.5	T				.7		2.5 A	/11
★ MJ450		3	SPA	150	C	40	O	30	20	10 A	2.0	T				1.0		10 A	/12
★ MJ480		3	SNA	87.5	C	40	O	4.0	30	1.0 A	4.0	T	200			1.0		1.0 A	/11
★ MJ481		3	SNA	87.5	C	60	O	4.0	30	1.0 A	4.0	T	200			1.0		1.0 A	/11
★ MJ490		3	SPA	87.5	C	40	O	4.0	30	1.0 A	4.0	T	200			.4		1.0 A	/11
★ MJ491		3	SPA	87.5	C	60	O	4.0	30	1.0 A	4.0	T	200			.4		1.0 A	/11
★ MJ500			SPS	60	C	60	O	7.0	25	2.0 A	30	T	300	200/250		.7		2.0 A	59/160
★ MJ501			SPS	60	C	80	O	7.0	25	2.0 A	30	T	300	200/250		.7		2.0 A	59/160
★ MJ802		3	SNA	200	C	100	R	30	25	7.5 A	2.0	T				.8		7.5 A	/11
★ MJ900		3	SPA	90	C	60	O	8.0	1000	3.0 A						2.0		3.0 A	/11
★ MJ901		3	SPA	90	C	80	O	8.0	1000	3.0 A						2.0		3.0 A	/11
★ MJ920		3	SPA	120	C	60	O	8.0	750	4.0 A	4.0	T	300			2.0		4.0 A	/253
★ MJ921		3	SPA	120	C	80	O	8.0	750	4.0 A	4.0	T	300			2.0		4.0 A	/253
★ MJ1000		3	SNA	90	C	60	O	8.0	1000	3.0 A						2.0		3.0 A	/11
★ MJ1001		3	SNA	90	C	80	O	8.0	1000	3.0 A						2.0		3.0 A	/11
★ MJ1200		3	SNA	120	C	60	O	8.0	750	4.0 A	4.0	T	200			2.0		4.0 A	/253
★ MJ1201		3	SNA	120	C	80	O	8.0	750	4.0 A	4.0	T	200			2.0		4.0 A	/253
★ MJ1800		3	SPA	100	C	250	O	5.0	40	400 m									/11
★ MJ2249		3	SPA	20	C	60	O	2.0	25	500 m	10	T				1.0		500 m	66/80
★ MJ2250		3	SPA	20	C	80	O	2.0	25	500 m	10	T				1.0		500 m	66/80
★ MJ2251		3	SNA	10	C	225	O	0.5	25	50 m	10	T							66/80
★ MJ2252		3	SNA	10	C	300	O	0.5	25	50 m	10	T							66/80
★ MJ2253		3	SPA	25	C	60	O	3.0	20	250 m	3.0	T				.3		500 m	66/80
★ MJ2254		3	SPA	25	C	80	O	3.0	20	250 m	3.0	T				.3		500 m	66/80
★ MJ2267		3	SPA	150	C	40	O	5.0	20	4.0 A	3.0	T				1.0		4.0 A	/11
★ MJ2268		3	SPA	150	C	55	O	5.0	20	4.0 A	3.0	T				1.0		4.0 A	/11
★ MJ2500		3	SPA	150	C	60	O	10	1000	5.0 A						2.0		5.0 A	/11

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max @ I_C/I_B	NF @ f dB Max & I_C	Unit	PACKAGE To-Case No. No.
★ MJ2501		3	SPA	150	C	80	O	10	1000	5.0 A						2.0		5.0 A	/11
★ MJ2801		3	SNA	115	C	40	O	15	15	8.0 A	1.0	T				1.5		8.0 A	/11
★ MJ2840		3	SNA	150	C	60	O	10	20	3.0 A	2.0	T							/11
★ MJ2841		3	SNA	150	C	80	O	10	20	4.0 A	2.0	T							/11
★ MJ2901		3	SPA	115	C	40	O	15	15	8.0 A	1.0	T				1.5		8.0 A	/11
★ MJ2940		3	SPA	150	C	60	O	10	20	3.0 A	4.0	T							/11
★ MJ2941		3	SPA	150	C	80	O	10	20	4.0 A	4.0	T							/11
★ MJ2955		3	SPA	150	C	70	R	15	20	4.0 A	4.0	T							/11
★ MJ3000		3	SNA	150	C	60	O	10	1000	5.0 A						2.0		5.0 A	/11
★ MJ3001		3	SNA	150	C	80	O	10	1000	5.0 A						2.0		5.0 A	/11
★ MJ3026		3	SNA	80	C	275	O	2.0	25	250 m									/11
★ MJ3027		3	SNA	80	C	300	O	2.0	25	250 m									/11
★ MJ3028		3	SNA	100	C	300	O	3.5	25	0.3 A									/11
★ MJ3029		3	SNA	125	C	250	O	5.0	25	0.3 A						2.0		3.0 A	/11
★ MJ3030		3	SNA	125	C	325	O	5.0	30	0.4 A						2.0		3.0 A	/11
★ MJ3040		3	SNA	100	C	300	O	7.0	100	2.5 A						2.2		2.5 A	/11
★ MJ3041		3	SNA	100	C	300	O	7.0	250	2.5 A						2.2		2.5 A	/11
★ MJ3042		3	SNA	100	C	350	O	7.0	250	2.5 A						2.2		2.5 A	/11
★ MJ3101		3	SNA	20	C	40	O	2.0	25	0.5 A	10	T				1.0		500 m	66/80
★ MJ3201		3	SNA	15	C	225	O	0.1	30	50 m	15	T				5.0		50 m	66/80
★ MJ3202		3	SNA	15	C	300	O	0.1	30	50 m	15	T				5.0		50 m	66/80
★ MJ3260		3	SNA	80	C	750	R	6.0			7.5	*	180			6.0		5.5 A	/11
★ MJ3430		3	SPA	125	C	300	O	5.0	15	2.5 A	2.5	T				.9		2.5 A	/11
★ MJ3480		3	SNA	56	C	700	O	5.0			7.5	*	125*						/11
★ MJ3520			SNA	150	C	40	O	15	500	4.0 A	2.0	T	600			2.5		4.0 A	3/1
★ MJ3521			SNA	150	C	80	O	15	500	4.0 A	2.0	T	600			1.8		4.0 A	3/1
★ MJ3583		1	SPA	35	C	175	O	1.0	10	1.0 A	10	T	120						66/80
★ MJ3584		1	SPS	35	C	250	O	2.0	25	1.0 A	10	T	120	300/700					66/80
★ MJ3585		1	SPS	35	C	300	O	2.0	25	1.0 A	10	T	120	300/700					66/80
★ MJ3701		3	SPA	25	C	40	O	3.0	20	250 m	3.0	T				.3		500 m	66/80
★ MJ3738			SPA	20	C	225	O	0.25	40	100 m	10	T	20						66/80
★ MJ3739			SPA	20	C	300	O	0.25	40	100 m	10	T	20						66/80
★ MJ3760		3	SNS	80	C	550	O	6.0			7.5*	T	150*	/700		5.0	2.4	6.0 A	3'/11
★ MJ3761		3	SNS	80	C	550	O	6.0			7.5*	T	150*	/700		5.0	2.7	8.0 A	3'/11
★ MJ3771		3	SNG	200	C	50	X	30	15	15 A	2.0	T		700/1800		1.0		15 A	/11
★ MJ3772		3	SNG	200	C	80	X	20	15	15 A	2.0	T		700/1800		.8		15 A	/11
★ MJ3773		3	SNG	200	C	160	X	16	15	8.0 A	1.0	T		1500/3800		.8		8.0 A	/11
★ MJ4000			SNA	75	C	60	O	4.0	1000	1.5 A						2.0		1.5 A	/11
★ MJ4001			SNA	75	C	80	O	4.0	1000	1.5 A						2.0		1.5 A	/11
★ MJ4010			SPA	75	C	60	O	4.0	1000	1.5 A						2.0		1.5 A	/11
★ MJ4011			SPA	75	C	80	O	4.0	1000	1.5 A						2.0		1.5 A	/11
★ MJ4030		3	SPA	150	C	60	O	16	1000	10 A						2.5		10 A	/11
★ MJ4031		3	SPA	150	C	80	O	16	1000	10 A						2.5		10 A	/11
★ MJ4032		3	SPA	150	C	100	O	16	1000	10 A						2.5		10 A	/11
★ MJ4033		3	SNA	150	C	60	O	16	1000	10 A						2.5		10 A	/11
★ MJ4034		3	SNA	150	C	80	O	16	1000	10 A						2.5		10 A	/11
★ MJ4035		3	SNA	150	C	100	O	16	1000	10 A						2.5		10 A	/11
★ MJ4200		3	SNA	60	C	60	O	40	750	2.0 A	4.0	T	120			2.0		2.0 A	/253
★ MJ4201		3	SNA	60	C	80	O	4.0	750	2.0 A	4.0	T	120			2.0		2.0 A	/253
★ MJ4210		3	SPA	60	C	60	O	4.0	750	2.0 A	4.0	T	200			2.0		2.0 A	/253
★ MJ4211		3	SPA	60	C	80	O	4.0	750	2.0 A	4.0	T	200			2.0		2.0 A	/253
★ MJ4240		1	SPS	35	C	300	O	2.0	10	.75 A	15	T	120	500/900					66/80
★ MJ4502		3	SPA	200	C	100	R	30	25	7.5 A	2.0	T				.8		7.5 A	/12
★ MJ4645		3	SPS	5.0	C	200	O	0.5	20	500 m	40	T	80	200/720		1.0		500 m	39/79
★ MJ4646		3	SPS	5.0	C	300	O	0.5	20	500 m	40	T	60	200/720		1.2		500 m	39/79
★ MJ4647		3	SPS	5.0	C	400	O	0.5	20	500 m	30	T	60	200/720					39/79
★ MJ4648		3	SPS	5.0	C	350	O	0.5	20	500 m	30	T	60	200/720		1.5		500 m	39/79
★ MJ5415		1	SPA	1.0	C	200	O	1.0	30	50 m	15	T	25						39/79
★ MJ5416		1	SPA	1.0	C	300	O	1.0	30	50 m	15	T	25						39/79
★ MJ6257		3	SNG	200	C	50	X	20	15	15 A	2.0	T		700/1800		.7		15 A	/11
★ MJ6302		3	SNG	200	C	160	X	16	15	8.0 A	1.0	T		1500/3800		.8		8.0 A	/11
★ MJ6700		3	SPG	60	C	60	O	7.0	25	2.0 A	30	T	300	200/1150		.7		2.0 A	59/160
★ MJ6701		3	SPG	60	C	80	O	7.0	25	2.0 A	30	T	300	200/1150		.7		2.0 A	59/160
★ MJ7000		3	SNA	150	C	100	O	30	20	10 A	30	T	600			1.0		10 A	63/188
★ MJ7160		3	SNG	140	C	300	O	8.0	10	8.0 A	30	T	150	200/2300		3.0	5.0	8.0 A	3/11
★ MJ7161		3	SNG	140	C	400	O	8.0	5	8.0 A	30	T	150	200/2300		3.0	2.5	8.0 A	3/11
★ MJ7200			SNA	300	C	80	O	60	20	20 A	20	T	1200			1.0		20 A	114/177
★ MJ7201			SNA	300	C	100	O	60	20	20 A	20	T	1200			1.0		20 A	114/177
★ MJ7260		3	SNG	175	C	300	O	15	5	15 A	30	T	175	200/2300		2.0	3.0	15 A	3/11
★ MJ7261		3	SNG	175	C	400	O	15	5	15 A	30	T	175	200/2300		2.0	3.0	15 A	3/11

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min		Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min	ΔV_{BE} mV Max	Gp dB Min	NF @ f dB Max		Unit	PACKAGE To-Case No. No.
															t_{on} ns Max	t_{off} ns Max	$V_{CE(sat)}$ Volts @	I_C / I_B &	I_C		
★ MJ8100		3	SPG	10	C	60	O	5.0	25	2.0	A	30	T	300	*200/1150*		.7		*2.0*	*A*	39/79
★ MJ8101		3	SPG	10	C	80	O	5.0	25	2.0	A	30	T	300	*200/1150*		.7		*2.0*	*A*	39/79
★ MJ9000		3	SNA	125	C	325	O	10									2.0		*6.0*	*A*	/11
★ MMCC918		3	SNF	0.2	A	15	O	0.05	20	3.0	m	600	T	1.7				6.0	**60**	**M**	/176
★ MMCC930		3	SNA	0.2	A	45	O	0.05	150	1.0	m	60	T	6.0			.35		*1.0*	*m*	/176
★ MMCM2221			SNA	0.20	A	30	O	0.1	40	150	m	200	T	8.0			.4	10	*150*	*m*	/176
★ MMCM2222		3	SNA	0.2	A	30	O		100	150	m	200	T	8.0	*16/160**		.4		*150*	*m*	/176
★ MMCM2369		3	SNS	0.2	A	15	O	0.2	40	10	m	500	T	4.0	*12/18*		.25		*10*	*m*	/176
★ MMCM2484		3	SNE	0.2	A	60	O	0.05	250	1.0	m	60	T	6.0				3.0	**AUD**		/176
★ MMCM2806			SNA	0.20	A	5	O	0.05	50	100	u	1200	T	0.6			.1	10	*100*	*u*	/176
★ MMCM2807			SNA	0.20	A	5	O	0.05	25	1.0	m	1200	T	0.55			.11	10	*10*	*u*	/176
★ MMCM2857		3	SNH	0.2	A	15	O	0.04	30	3.0	m	1000	T	1.0							/176
★ MMCM2906			SNA	0.20	A	40	O	0.6	40	150	m	200	T	8.0			.4	10	*150*	*m*	/176
★ MMCM2907		3	SPA	0.2	A	40	O	0.6	100	150	m	200	T	80	*20/150**		.4		*150*	*m*	/176
★ MMCM3904		3	SNA	0.2	A	40	O	0.2	100	10	m	300	T	4.0			.2	10	*10*	*m*	/176
★ MMCM3905		3	SNA	0.2	A	40	O	0.2	50	10	m	200	T	4.5			.25	10	*10*	*m*	/176
★ MMCM3906		3	SNA	0.2	A	40	O	0.2	100	10	m	250	T	4.5			.25	10	*10*	*m*	/176
★ MMCM4261			SPH	0.2	A	10	O	0.05	30	10	m	1500	T	2.5			.4	10	*10*	*m*	/176
★ MMT70		3	SNE	.225	A	20	O	0.05	150	2.0	m			8.0				1.0	**AUD**		/28
★ MMT71		3	SPE	.225	A	20	O	0.05	150	2.0	m			6.0				1.5	**1000**	**H**	/28
★ MMT72		3	SNS	.225	A	10	O	0.2	30	10	m	400	T	6.0	*20/30*						/28
★ MMT73		3	SPS	.225	A	8	O	0.2	30	10	m	400	T	5.0	*30/30*		.2		*10*	*m*	/28
★ MMT74		3	SNF	.225	A	12	O	0.04	25	3.0	m	700	T				14*	4.0	**450**	**M**	/28
★ MMT75		3	SPE	.225	A	20	O	0.2	50	10	m			5.0	*43/155**			1.0	**AUD**		/28
★ MMT76		3	SNE	.225	A	20	O	0.2	50	10	m			5.0	*37/1136*			3.0	**AUD**		/28
★ MMT806		3	SNA	.225	A	5	O		50			1200	T	0.6			.1		*100*	*u*	/28
★ MMT807		3	SNF	.225	A	5	O		25	1.0	m	1200	T	0.55			18*	2.0	**200**	**M**	/28
★ MMT808		3	SPA	.225	A	5	O		50	0.1	m	1200	T	0.8			.1		*100*	*u*	/28
★ MMT809		3	SPF	.225	A	5	O		25	1.0	m	1200	T	0.8			17*	2.6	**200**	**M**	/28
★ MMT918		3	SNF	.225	A	15	O	0.05	20	3.0	m	600	T	1.7				6.0	**60**	**M**	/28
★ MMT930		3	SNA	.225	A	45	O	0.05	150	1.0	m	60	T	6.0			.35		*1.0*	*m*	/28
★ MMT2222		3	SNG	.225	A	30	O	0.3	100	150	m	200	T	8.0	*20*/180**		*0.4*	*10*	*150*	*m*	/28
★ MMT2369		3	SNS	.225	A	15	O	0.2	40	10	m	500	T	4.0	*12/18*		.25		*10*	*m*	/28
★ MMT2484		3	SNE	.225	A	60	O	0.05	250	1.0	m	60	T	6.0				3.0	**AUD**		/28
★ MMT2857		3	SNF	.225	A	15	O	0.04	30	3.0	m	1000	T				18*	3.8	**450**	**M**	/28
★ MMT2907		3	SPG	.225	A	40	O	0.3	100	150	m	200	T	8.0	*20*/120**		*0.4*	*10*	*150*	*m*	/28
★ MMT3014		3	SNS	.225	A	20	O	0.2	50	30	m	350	T	5.0	*16/25*		.22		*30*	*m*	/28
★ MMT3546		3	SPS	.225	A	12	O	0.25	30	10	m	700	T	6.0	*25/35*		.15		*10*	*m*	/28
★ MMT3798		3	SPA	.225	A	60	O	0.05	150	1.0	m	40	T	4.0					**AUD**		/28
★ MMT3799		3	SPA	.225	A	60	O	0.05	300	1.0	m	40	T	4.0					**AUD**		/28
★ MMT3903		3	SNA	.225	A	40	O	0.2	20	100	u	250	T	4.0	*60*/170**		*0.2*	*10*	*10*	*m*	/28
★ MMT3904		3	SNA	.225	A	40	O	0.2	40	100	u	300	T	4.0	*60*/170**		*0.2*	*10*	*10*	*m*	/28
★ MMT3905		3	SPA	.225	A	40	O	0.2	30	100	u	200	T	4.5	*55*/220**		*.25*	*10*	*10*	*m*	/28
★ MMT3906		3	SPA	.225	A	40	O	0.2	60	100	u	250	T	4.5	*55*/220**		*.25*	*10*	*10*	*m*	/28
★ MMT3960		3	SNS	.225	A	3	O		100	10	m	1600	T	2.0	*0.95/1.05*		*.2*		*10*	*m*	/28
★ MMT3960A		3	SNS	.225	A	8	O		30	10	m	1600	T	2.0	*1.0/1.1*		*.2*		*10*	*m*	/28
★ MMT8015		3	SNF	0.2	A	10	O	.015	25	1.0	m	1000	T				6.0	3.2	**1000**	**M**	/28
★ MM439		3	SPR	0.25	A	15	O	0.05	30	3.0	m	800	T	0.6			18	3.5	**200**	**M**	72/20
★ MM869B			SPG	0.36	A	30	O	0.2	40	10	m	400	T	6.0	*50/80*		*.15*		*10*	*m*	18/20
★ MM1500		3	SNO	3.5	C	15	O	0.2				1500	T	5.0	**0.25/**						107/24
★ MM1501			SNA	3.5	C	15	O	0.2				1000	T	5.0							107/23
★ MM1505		3	SNS	.3	A	6	O	.05	3	1.0	A	600	T	3.0	*12/12*		*250*	*10*	*1.0*	*m*	52/27
★ MM1553		3	SNA	0.08	C	70	O	8.0	15	2.0	A			85							/145
★ MM1748		3	SNS	0.3	A	6	O	0.1	20	10	m	600	T	3.0	*15/15*		*.3*		*3.0*	*m*	52/27
★ MM1748A		3	SNS	0.3	A	6	O	0.05	30	10	m	800	T	3	*6.0/15*		*.3*	*20*	*3.0*	*m*	52/27
★ MM1941		3	SNH	0.3	A	30	S	0.2	25	10	m	600	T	2.5			7.0		**175**	**M**	18/22
★ MM2258		3	SNA	1.0	A	120	O	0.5	50	10	m	150	T	9.0			*.4*		*25*	*m*	5/31
★ MM2259		3	SNA	1.0	A	175	O	0.3	35	10	m	150	T	8.0			*.4*		*25*	*m*	5/31
★ MM2260		3	SNA	1.0	A	175	O	0.3	50	10	m	150	T	8.0			*.4*		*25*	*m*	5/31
★ MM2484			SNF	1.2	C	60	O	0.05	250	1.0	m	60	T	6.0				3.0	**15**	**M**	18/22
D MM2894A	2N3546		SPS	0.36	A	12	O	0.2	40	30	m	800	T	4.5	*60/35*						18/22
★ MM3000		3	SNA	1.0	A	100	O	0.2	20	10	m	150	T	7.0							39/79
★ MM3001		3	SNA	1.0	A	150	O	0.2	20	10	m	150	T	7.0							39/79
★ MM3002		3	SNA	1.0	A	200	O	0.05	20	10	m	150	T	15							39/79
★ MM3003		3	SNA	1.0	A	250	O	0.05	20	10	m	150	T	15							39/79
★ MM3005		3	SNA	1.0	A	60	O	2.5	50	150	m	50	T	15			*.35*		*150*	*m*	39/79
★ MM3006		3	SNA	1.0	A	80	O	2.5	50	200	m	50	T	15			*.35*		*150*	*m*	39/79
★ MM3007		3	SNA	1.0	A	100	O	2.5	50	250	m	50	T	15			*.35*		*150*	*m*	39/79
★ MM3008		3	SNA	1.0	A	120	O	0.4	30	1.0	m	50	T								39/79
★ MM3009		3	SNA	1.0	A	180	O	0.4	30	1.0	m	50	T								39/79

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF dB Max @ I_C/I_B	f & I_C	Unit	PACKAGE To-Case No.
★ MM3019			SNA	1.0	A	80	O	1.0	100	150 m	80	T	12			.2		150 m		39/79
★ MM3020			SNA	1.0	A	80	O	1.0	40	150 m	80	T	12			.2		150 m		39/79
★ MM3053		3	SNA	1.0	A	50	O	1.0	40	150 m	100	T	10			.6		150 m		39/79
★ MM3220			SNS	1.0	A	30	O	1.0	25	150 m	200	T	3.0	*30/45*		.2	10	150 m		39/79
★ MM3375			SNA	11.6	C	35	O	1.5					18							60/36
★ MM3375A			SNA	11.6	C	35	O	1.5					10							60/36
★ MM3726		3	SPG	1.0	A	50	O	1.5	30	500 m	200	T		*30/90*		.6		150 m		5/31
★ MM3734		3	SNG	1.0	A	30	O	1.5	25	1.0 A	200	T	15	*35/60*		.25	10	10 m		39/79
★ MM3735		3	SNG	1.0	A	50	O	1.5	25	1.0 A	200	T	15	*35/60*		.25	10	10 m		39/79
★ MM3736		3	SNS	2.0	C	30	O	1.5	30	1.0 A	200	T	9.0	*45/65*		.9		1.0 A		46/26
★ MM3737		3	SNS	2.0	C	50	O	1.5	20	1.0 A	200	T	9.0	*45/65*		.9		1.0 A		46/26
★ MM3903		3	SNE	0.36	A	40	O	0.2	50	10 m	250	T	5.0	*70/220*			6.0	AUD		52/27
★ MM3904		3	SNE	0.36	A	40	O	0.2	100	10 m	300	T	5.0	*70/250*			5.0	AUD		52/27
★ MM3905		3	SPE	0.36	A	40	O	0.2	50	10 m	200	T	5.0	*70/260*			5.0	AUD		52/27
★ MM3906		3	SPE	0.36	A	40	O	0.2	100	10 m	250	T	50	*70/300*			4.0	AUD		52/27
★ MM4000		3	SPA	0.6	A	100	O	0.1	20	10 m			6.0			.6		10 m		39/79
★ MM4001		3	SPA	1.0	A	150	O	0.5	20	10 m			10			.6		10 m		39/79
★ MM4002		3	SPA	1.0	A	200	O	0.5	20	10 m			20			5.0		10 m		39/79
★ MM4003		3	SPA	1.0	A	250	O	0.5	20	10 m			20			5.0		10 m		39/79
★ MM4005		3	SPA	1.0	A	60	O	1.0	40	1.0 A	50	T	15							39/79
★ MM4006		3	SPA	1.0	A	80	O	1.0	40	1.0 A	50	T	15							39/79
★ MM4007		3	SPA	1.0	A	100	O	1.0	40	1.0 A	50	T	15							39/79
★ MM4008		3	SPA	1.0	A	60	O	0.1	75	10 m										39/79
★ MM4009		3	SPA	1.0	A	80	O	0.1	75	10 m										39/79
★ MM4010		3	SPA	1.0	A	100	O	0.1	75	10 m										39/79
★ MM4018		3	SPP	5.0	C	20	O	0.4	10	50 m	900*	T	3.5	**0.5/**						39/79
★ MM4030		3	SPG	1.0	A	60	O	1.0	40	100 m	400	T	20	*100/350*		.15	10	150 m		/79
★ MM4031		3	SPG	1.0	A	80	O	1.0	100	100 m	400	T	20	*100/350*		.15	10	150 m		/79
★ MM4032		3	SPG	1.0	A	60	O	1.0	40	100 m	500	T	20	*100/350*		.15	10	150 m		/79
★ MM4033		3	SPG	1.0	A	80	O	1.0	100	100 m	500	T	20	*100/350*		.15	10	150 m		/79
★ MM4036		3	SPG	5	A	65	O	1.0	20	150 m	60	T		*75/175*		.65	10	150 m		
★ MM4037		3	SPG	1.0	A	40	O	1.0	15	1.0 m	60	T	30	*75/175*		*1.4*	10	150 m		39/79
★ MM4049		3	SPI	0.2	A	10	O	0.03	20	25 m	4000	T	1.25							72/20
★ MM4052		3	SPC	0.5	A	30	O	0.5	20	10 m			10							46/26
★ MM4208		3	SPS	0.36	A	12	O	0.2	30	10 m	850	T	3.0	*15/20*		*.18*		10 m		18/22
★ MM4208A		3	SPS	0.36	A	15	O	0.2	30	10 m	850	T	3.0	*15/20*		*.18*		10 m		18/22
★ MM4209		3	SPS	0.36	A	12	O	0.2	50	10 m	850	T	3.0	*15/20*		*.18*		10 m		18/22
★ MM4209A		3	SPS	0.36	A	15	O	0.2	50	10 m	850	T	3.0	*15/20*		*.18*		10 m		18/22
★ MM4257		3	SPS	0.36	A	6	O	0.08	30	10 m	500	T		*15/15*						18/22
★ MM4258		3	SPS	0.36	A	12	O	0.08	30	10 m	700	T		*15/20*						18/22
★ MM4261H		3	SPS	0.2	A	15	O	0.03	30	10 m	1500	T	2.5	*3.0/3*		*.15*	10	1.0 m		/20
★ MM4404			GPA	0.15	A	24	S	0.25	30	12 m			20	*190/300**						18/22
★ MM4404A			GPA	0.15	A	35	S	0.25	30	12 m			20							18/22
★ MM5005		3	SPA	1.5	A	60	O	2.0	50	150 m	30	T	20			.5		150 m		39/79
★ MM5006		3	SPA	1.5	A	80	O	2.0	50	200 m	30	T	20			.5		150 m		39/79
★ MM5007		3	SPA	1.5	A	100	O	2.0	50	250 m	30	T	20			.5		150 m		39/79
★ MM5189		3	SNG	1.0	A	40	O	2.0	20	1.0 A	350*	T	7.3*	*40/70*		*1.0*	10	1.0 A		39/79
★ MM5262		3	SNG	1.0	A	50	O	2.0	35	100 m	350*	T	7.3*	*30/60*		*0.8*	10	1.0 A		39/79
★ MM6427		3	SNA	.375	A	40	O	0.3	5000	10 m	125	T	8.0			*1.5*	*1K*	100 m		18/22
★ MM8000		3	SNA	3.5	C	30	O	0.4	30	50 m	550	T	3.5							39/79
★ MM8001		3	SNF	3.5	C	30	O	0.4	30	50 m	700	T	3.5			11	2.7	200 M		39/79
★ MM8002			SNA	3.5	C	30	O	0.4	30	50 m	1000	T	3.5			11	2.7	200 M		39/79
★ MM8003			SNF	5.0	C	30	O	0.4	30	50 m	1000	T	4.0			11	2.7	200 M		/144
★ MM8006		3	SNF	0.2	A	10	O	0.02	25	1.0 m	1000	T				14	3.8	450 M		72/20
★ MM8007		3	SNF	0.2	A	10	O	0.02	25	1.0 m	1000	T				12	5.0	450 M		72/20
★ MM8008		3	SNO	3.5	C	30	O	0.1			1100*	T	3.0	**0.3/**		**.3**		**20 G**		107/23
★ MM8009		3	SNP	3.5	C	50	O	0.4	20	100 m	100*	T	3.0	**0.9/**		**.5**		**1.0 G**		107/79
★ MM8010		3	SNO	3.5	C	30	O	0.1			1100*	T	3.0	**0.2/**		**.3**		**20 G**		107/23
★ MM8011		3	SNA	3.5	C	30	O	0.1			1100	*	3.0			*.3*		*100 m*		107/23
D MPM5006	MPS3363	3	SNA	0.31	A	40	O	0.1	30	4.0 m			1.6			*2.0*		*10 m*		92/29
★ MPQ918		3	**SNA**	.625	A	15	O	0.05	20	3.0 m	600	T	1.7				6.0	**60 M**		/646
★ MPQ1000		3	**SNA**	0.65	A	20	O	0.5	50	10 m	175	T	8.0			*0.5*	*10*	*150 m*		116/646
★ MPQ1050		3	SNS	0.75	A	30	O	1.0	40	100 m	200	T	10	*35/45*		**.45**	**10**	**500 M**		116/646
★ MPQ2221		3	**SNA**	0.65	A	40	O	0.5	40	150 m	200	T	8.0							/646
★ MPQ2222		3	**SNA**	0.65	A	40	O	0.5	100	150 m	200	T	8.0			*.4*		*150 m*		/646
★ MPQ2369		3	**SNA**	0.5	A	15	O	0.5	40	10 m	450	T	4.0			*.25*		*10 m*		/646
★ MPQ2483		3	**SNA**	.625	A	40	O	0.05	150	1.0 m	50	T					3.0	AUD		/646
★ MPQ2484		3	**SNA**	.625	A	40	O	0.05	300	1.0 m	50	T					2.0	AUD		/646
★ MPQ2906		3	**SPA**	0.65	A	40	O	0.6	40	150 m	200	T	8.0	*30/100**		*.4*		*150 m*		/646
★ MPQ2907		3	**SPA**	0.65	A	40	O	0.6	100	150 m	200	T	8.0	*30/100**		*.4*		*150 m*		/646

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / @ I_C & I_B	Unit	PACKAGE To-Case No. No.
★ MPQ3303		3	SNS	0.65 A		12	0	1.0	40	300 m	400 T		10	*15/25*		*0.7*	*10*	*1.0 A*	116/646
★ MPQ3467		3	SPS	0.75 A		40	0	1.0	20	500 m	125 T		25	*40/90*		*0.5*	*10*	*500 m*	116/646
★ MPQ3546		3	SPA	0.5 A		12	0	3.2	30	10 m	600 T		6.0	*15/25**		*.25*		*10 m*	/646
★ MPQ3725		3	SNG	1.0 A		40	0		35	100 m	250 T		10	*35/60*		*.45*		*500 m*	/646
★ MPQ3762		3	SPG	0.75 A		40	0	1.5	35	150 m	150 T		15	*50/120*		*.55*	*10*	*500 m*	116/646
★ MPQ3798		3	SPA	.625 A		40	0	0.05	150	0.1 m	60 T		4.0				**2.5**	**AUD**	/646
★ MPQ3799		3	SPA	.625 A		60	0	0.05	300	0.1 m	60 T		4.0				**1.5**	**AUD**	/646
★ MPQ3904		3	SNG	0.50 A		40	0	0.2	75	10 m	250 T		4.0	*37/136*		*0.2*	*10*	*10 m*	116/646
★ MPQ3906		3	SPG	0.50 A		40	0	0.2	75	10 m	200 T		4.5	*43*/155**		*.25*	*10*	*10 m*	116/646
★ MPQ6001		3	SCG	0.65 A		30	0	0.5	40	150 m	200 T		8.0	*30*/225**		*0.4*	*10*	*150 m*	116/646
★ MPQ6002		3	SCG	0.65 A		30	0	0.5	100	150 m	200 T		8.0	*30*/225**		*0.4*	*10*	*150 m*	116/646
★ MPQ6100		3	SCA	0.50 A		40	0	0.05	75	500 u	50 T		4.0			*.25*	*10*	*1.0 m*	116/646
★ MPQ6100A		3	SCA	0.50 A		45	0	0.05	150	500 u	50 T		4.0			*.25*	*10*	*1.0 m*	116/646
★ MPQ6501		3	SCG	0.65 A		30	0	0.5	40	150 m	200 T		8.0	*30/225**		*0.4*	*10*	*150 m*	116/646
★ MPQ6502		3	SCG	0.65 A		30	0	0.5	100	150 m	200 T		8.0	*30/225**		*0.4*	*10*	*150 m*	116/646
★ MPQ6600		3	SCA	0.50 A		40	0	0.05	75	500 u	50 T		4.0			*.25*	*10*	*1.0 m*	116/646
★ MPQ6600A		3	SCA	0.50 A		45	0	0.05	150	500 u	50 T		4.0			*.25*	*10*	*1.0 m*	116/646
★ MPQ6700		3	SCA	0.50 A		40	0	0.20	70	10 m	200 T		4.5			*.25*	*10*	*10 m*	116/646
★ MPSA05		3	SNA	0.5 A		60	0	0.5	50	100 m	50 T		6.0						92/29
★ MPSA06		3	SNA	0.5 A		80	0	0.5	50	100 m	50 T		6.0						92/29
★ MPSA09		3	SNE	0.31 A		50	0	0.05	100	0.1 m	30 T		5.0				**1.4**	**1000 H**	92/29
D MPSA10	MPSA20		SNA	0.30 A		40	0	0.1	40	5.0 m	50 T		4.0						92/29
★ MPSA12		3	SNA	0.31 A		20	0		20K	10 m			8.0						92/29
★ MPSA13		3	SNA	0.5 A		30	0	0.3	10K	100 m	125 T		5.0						92/29
★ MPSA14		3	SNA	0.5 A		30	0	0.3	20K	100 m	125 T		5.0						92/29
★ MPSA16		3	SNA	0.35 A		40	0	0.1	200	5.0 m	100 T		4.0						92/29
★ MPSA17		3	SNA	0.35 A		40	0	0.1	200	5.0 m	80 T		4.0						92/29
★ MPSA18		3	SNE	0.35 A		45	0	0.20	500	10 m	100 T		3.0				**1.5**	**AUD**	92/29
★ MPSA20		3	SNA	0.3 A		40	0	0.1	40	5.0 m	125 T		4.0						92/29
★ MPSA42		3	SNA	.625 A		300	0	0.5	40	30 m	50 T								92/29
★ MPSA43		3	SNA	.625 A		200	0	0.5	50	30 m	50 T								92/29
★ MPSA55			SPA	0.5 A		60	0	0.5	50	100 m	50 T		6.5						92/29
★ MPSA56		3	SPA	0.5 A		80	0	0.5	50	100 m	50 T		6.5						92/29
★ MPSA65		3	SPA	0.5 A		30	0	0.3	20K	100 m	100 T		2.5*						92/29
★ MPSA66		3	SPA	0.5 A		30	0	0.3	40K	100 m	100 T		2.5*						92/29
★ MPSA70		3	SPA	0.3 A		40	0	0.1	40	5.0 m	125 T		4.0						92/29
★ MPSA92		3	SPA	.625 A		300	0	0.5	25	30 m	50 T								92/29
★ MPSA93		3	SPA	.625 A		200	0	0.5	30	30 m	50 T								92/29
★ MPSD01		3	SNA	.625 A		200	0	0.1	25	10 m	40 T								92/29
★ MPSD02		3	SNA	0.35 A		140	0	0.05	25	10 m	40 T								92/29
★ MPSD03		3	SNA	0.35 A		100	0	0.05	25	10 m	40 T								92/29
★ MPSD04		3	SNA	.625 A		25	S	0.3	2000	100 m	100 T								92/29
★ MPSD05		3	SNA	0.35 A		25	0	0.5	80	100 m	100 T								92/29
★ MPSD06		3	SNA	0.35 A		25	0	0.05	50	50 m	100 T								92/29
★ MPSD51		3	SPA	.625 A		200	0	0.1	25	10 m	40 T								92/29
★ MPSD52		3	SPA	0.35 A		140	0	0.05	25	10 m	40 T								92/29
★ MPSD53		3	SPA	0.35 A		100	0	0.05	25	10 m	40 T								92/29
★ MPSD54		3	SPA	.625 A		25	S	0.3	2000	100 m	100 T								92/29
★ MPSD55		3	SPA	0.35 A		25	0	0.5	80	100 m	100 T								92/29
★ MPSD56		3	SPA	0.35 A		25	0	0.05	50	50 m	100 T								92/29
★ MPSH02		3	SNF	0.5 A		20	0		20	4.0 m	375 T					20	3.3	200 M	92/29
★ MPSH04		3	SNF	0.3 A		80	0	0.1	30	1.5 m	80 T						2.0	1 M	92/29
★ MPSH05		3	SNA	0.3 A		80	0	0.1	30	1.5 m	80 T								92/29
★ MPSH07		3	SNF	0.31 A		30	0		20	3.0 m	400 T					18	3.2	200 M	92/29
★ MPSH08		3	SNF	0.31 A		30	0		20	3.0 m	500 T					14	3.5	200 M	92/29
★ MPSH10		3	SNA	0.35 A		25	0		60	4.0 m	650 T								92/29
★ MPSH11		3	SNA	0.35 A		25	0		60	4.0 m	650 T								92/29
★ MPSH17		3	SNF	.625 A		15	0		25	5.0 m	800 T					24	6.0	200 M	92/29
★ MPSH19		3	SNA	0.35 A		25	0		45	4.0 m	300 T								92/29
★ MPSH20		3	SNA	.625 A		30	0	0.1	25	4.0 m	400 T								92/29
★ MPSH24		3	SNA	0.5 A		30	0	0.1	30	8.0 m	400 T								92/29
★ MPSH30		3	SNF	0.31 A		20	0		20	4.0 m	300 T					22	6.0	45 M	92/29
★ MPSH31		3	SNF	0.31 A		20	0		20	4.0 m	300 T					22	6.0	45 M	92/29
★ MPSH32		3	SNF	0.51 A		40	0		27	4.0 m	300 T					22	3.3	45 M	92/29
★ MPSH33			SNH	0.3 A		30	0		20	2.5 m	600 T		0.3					850 M	/29A
★ MPSH34		3	SNA	0.5 A		45	0	0.1	15	20 m	500 T								92/29
★ MPSH37		3	SNA	0.31 A		40	0		25	5.0 m	300 T								92/29
★ MPSH54		3	SPF	0.3 A		80	0	0.1	30	1.5 m	80 T						2.0	1 M	92/29
★ MPSH55		3	SPA	0.3 A		80	0	0.1	30	1.5 m	80 T								92/29
★ MPSH81		3	SPA	0.35 A		20	0		60	5.0 m	600 T								92/29

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	I_C	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min @ $V_{CE(sat)}$ Volts Max	NF dB Max @ I_C/I_B	f & I_C	Unit	PACKAGE To-Case No. No.
★ MPSH83		3	SPP	.625	A	30	O		20	2.5	m	600	T	0.3					850	M	/29A
★ MPSH85		3	SPF	0.31	A	30	O		20	2.5	m	350	T				14	6.5	200	M	/29A
★ MPSL01		3	SNA	.625	A	120	O	0.15	50	10	m	60	T	8.0			*0.2*	*10*	*10*	*m*	92/29
★ MPSL51		3	SPA	0.31	A	100	O	0.6	40	50	m	60	T	8.0							92/29
★ MPSM83			SPF	0.35	A	30	O		20	25	m	600	T				10	6.5	850	M	/262
★ MPSU01		3	SNA	1.0	A	30	O	2.0	50	1.0	A	50	T	20							/152
★ MPSU01A		3	SNA	1.0	A	40	O	2.0	50	1.0	A	50	T	20							/152
★ MPSU02		3	SNA	1.0	A	40	O	0.8	50	150	m	150	T	8.0							/152
★ MPSU03		3	SNA	1.0	A	120	O	1.0	40	10	m	100	T	12							/152
★ MPSU04		3	SNA	1.0	A	180	O	1.0	40	10	m	100	T	12							/152
★ MPSU05		3	SNA	1.0	A	60	O	2.0	60	250	m	50	T	12							/152
★ MPSU06		3	SNA	1.0	A	80	O	2.0	60	250	m	50	T	12							/152
★ MPSU07		3	SNA	1.0	A	100	O	2.0	30	250	m	50	T	12							/152
★ MPSU10		3	SNA	1.0	A	300	O	0.5	40	10	m	60	T	3.0							/152
D MPSU31	MPSU45	3	SNH	1.0	A	65	S	0.5	10	100	m			40			11		27	M	/152
★ MPSU45		3	SNA	1.0	A	40	O	2.0	25K	200	m	100	T								/152
★ MPSU51		3	SPA	1.0	A	30	O	2.0	50	1.0	A	50	T	30							/152
★ MPSU51A		3	SPA	1.0	A	40	O	2.0	50	1.0	A	50	T	30							/152
★ MPSU52		3	SPA	1.0	A	40	O	0.8	50	150	m	150	T	24							/152
★ MPSU55		3	SPA	1.0	A	60	O	2.0	50	250	m	50	T	15							/152
★ MPSU56		3	SPA	1.0	A	80	O	2.0	50	250	m	50	T	15							/152
★ MPSU57		3	SPA	1.0	A	100	O	2.0	30	5.0	m	50	T	15							/152
★ MPSU60		3	SPA	1.0	A	300	O	0.5	25	1.0	m	60	T	60							/152
★ MPSU95		3	SPA	1.0	A	40	O	2.0	4K	1.0	A	320	*								/152
★ MPS404		3	SPG	0.35	A	24	O	0.15	30	12	m	3.2	B	20	*223*/835**		*.15*	*30*	*12*	*m*	92/29
★ MPS404A		3	SPG	0.35	A	35	O	0.15	30	12	m	3.2	B	20	*223*/835**		*.15*	*24*	*12*	*m*	92/29
★ MPS706		3	SNG	0.31	A	20	R		20	10	m	200	T	6.0	*40/75*		*.6*		*10*	*m*	92/29
★ MPS706A		3	SNG	0.31	A	20	R		20	10	m	200	T	6.0	*40/75*		*.6*		*10*	*m*	92/29
★ MPS834		3	SNS	0.31	A	30	S	0.2	25	10	m	350	T	4.0	*16/30*		*.25*		*10*	*m*	92/29
★ MPS918		3	SNF	0.31	A	15	O		20	3.0	m	600	T	1.7			15	6.0	200	M	92/29
★ MPS2369		3	SNS	0.31	A	15	O	0.5	40	10	m	500	T	4.0	*12/18*		*.25*		*10*	*m*	92/29
D MPS2711	MPS3393		SNA	0.31	A	18	O	0.1	30	2.0	m			4.0							92/29
★ MPS2712		3	SNA	0.31	A	18	O	0.1	75	2.0	m										92/29
D MPS2713	2N4265		SNA	0.31	A	18	O	0.2	30	2.0	m	250	T	2.5*	*13/21**		*.3*		*50*	*m*	92/29
★ MPS2714		3	SNA	0.31	A	18	O	0.2	75	2.0	m	250	T	2.5*	*13/21**		*.3*		*50*	*m*	92/29
★ MPS2923		3	SNA	0.2	A	25	O	0.1						12							92/29
★ MPS2924		3	SNA	0.2	A	25	O	0.1						12							92/29
★ MPS2925		3	SNA	0.2	A	25	O	0.1						12							92/29
★ MPS2926		3	SNA	0.31	A	18	O	0.1				300	T	3.5							92/29
★ MPS3392		3	SNA	0.31	A	25	O	0.1	150	2.0	m			3.5							92/29
★ MPS3393		3	SNA	0.31	A	25	O	0.1	90	2.0	m			3.5							92/29
★ MPS3394		3	SNA	0.31	A	25	O	0.1	55	2.0	m			3.5							92/29
★ MPS3395		3	SNA	0.31	A	25	O	0.1	150	2.0	m			3.5							92/29
★ MPS3563		3	SNF	0.31	A	12	O	0.5	20	8.0	m	600	T	1.7			14	6.0	200	M	92/29
★ MPS3638		3	SPG	0.31	A	25	O	0.5	30	50	m	100	T	20	*75/170*		*.25*		*50*	*m*	92/29
★ MPS3638A		3	SPG	0.31	A	25	O	0.5	100	50	m	150	T	10	*75/170*		*.25*		*50*	*m*	92/29
★ MPS3639		3	SPS	0.2	A	6	O	0.08	30	10	m			3.5	*25/25*		*.16*		*10*	*m*	92/29
★ MPS3640		3	SPS	0.35	A	12	O	0.08	30	10	m	500	T	3.5	*25/35*		*0.2*	*10*	*10*	*m*	92/29
★ MPS3646		3	SNS	0.35	A	15	O	0.3	30	30	m	350	T	5.0	*18/28*		*0.2*	*10*	*30*	*m*	92/29
★ MPS3693		3	SNF	0.31	A	45	O		40	10	m	200	T	3.5				4.0	1	M	92/29
★ MPS3694		3	SNF	0.31	A	45	O		100	10	m	200	T	3.5				4.0	1	M	92/29
★ MPS3702		3	SPA	0.31	A	25	O	0.2	60	50	m	100	T	12			*.25*		*50*	*m*	92/29
★ MPS3703		3	SPA	0.31	A	30	O	0.2	30	50	m	100	T	12			*.25*		*50*	*m*	92/29
★ MPS3704		3	SNA	0.31	A	30	O	0.6	100	50	m	100	T	12			*.6*		*100*	*m*	92/29
★ MPS3705		3	SNA	0.31	A	30	O	0.6	50	50	m	100	T	12			*.8*		*100*	*m*	92/29
★ MPS3706		3	SNA	0.31	A	20	O	0.6	30	50	m	100	T	12			*1.0*		*100*	*m*	92/29
★ MPS3707		3	SNE	0.31	A	30	O	0.03	100	0.1	m							5.0	AUD		92/29
D MPS3708	2N4124		SNE	0.31	A	30	O	0.03	45	1.0	m							5.0	AUD		92/29
★ MPS3709		3	SNE	0.31	A	30	O	0.03	45	1.0	m							5.0	AUD		92/29
★ MPS3710		3	SNE	0.31	A	30	O	0.03	90	1.0	m							5.0	AUD		92/29
★ MPS3711		3	SNE	0.31	A	30	O	0.03	180	1.0	m							5.0	AUD		92/29
D MPS3721	2N4124		SNA	0.31	A	18	O	0.1						3.5							92/29
★ MPS4354		3	SPE	.625	A	60	O	1.0	50	10	m	100	T		*100/400*			3.0	1000	H	92/29
★ MPS4355		3	SPE	.625	A	60	O	1.0	100	10	m	100	T		*100/400*			3.0	1000	H	92/29
★ MPS4356		3	SPE	.625	A	80	O	1.0	50	10	m	100	T		*100/400*			3.0	1000	H	92/29
★ MPS5172		3	SNA	0.21	A	25	O	0.1	100	10	m	120	*				*.25*		*10*	*m*	92/29
★ MPS6507		3	SNA	0.21	A	20	O	0.1	25	2.0	m	700	T	2.5							92/29
★ MPS6511		3	SNH	0.31	A	20	O	0.1	25	10	m			2.5			30		45	M	92/29
★ MPS6512		3	SNE	0.31	A	30	O	0.1	50	2.0	m	250	*	3.5				2.0	AUD		92/29
★ MPS6513		3	SNE	0.31	A	30	O	0.1	90	2.0	m	250	*	3.5				2.0	AUD		92/29

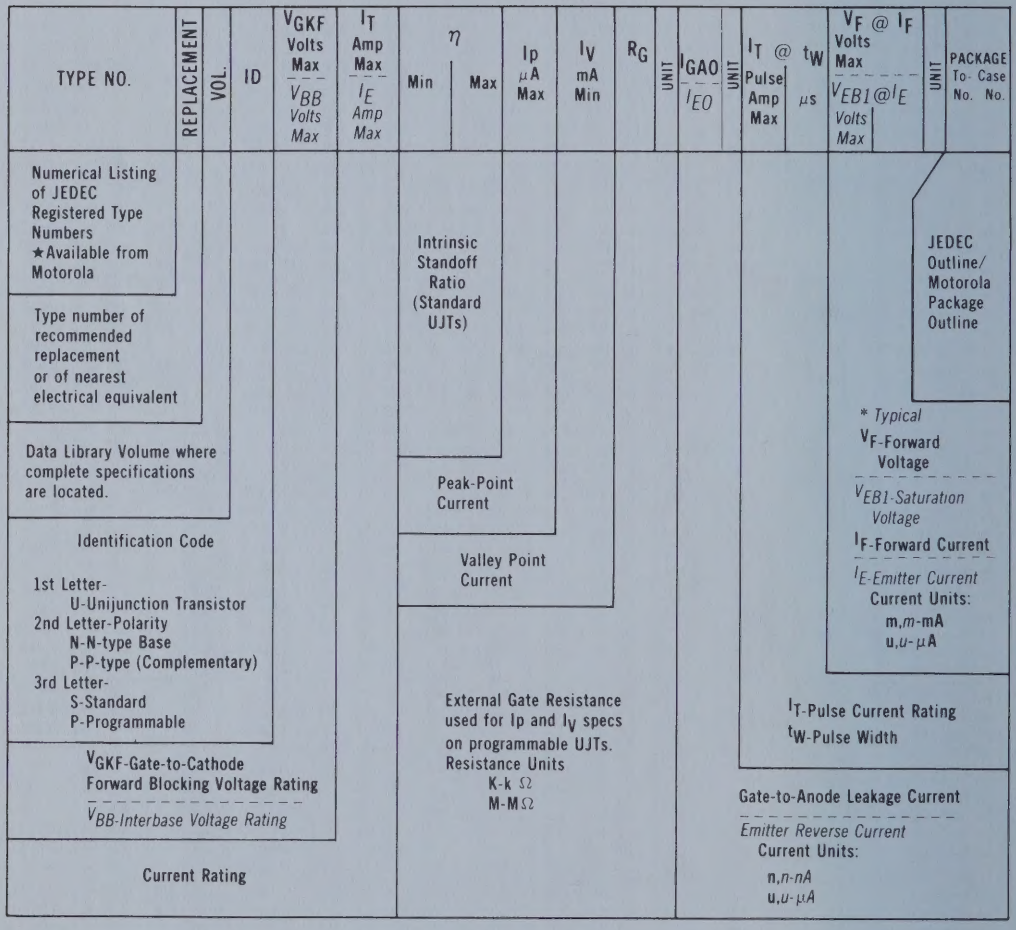
TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C & I_B	Unit	PACKAGE To-Case No. No.
★ MPS6514		3	SNE	0.31	A	25	O	0.1	150	2.0 m	390	*	3.5				2.0	AUD	92/29
★ MPS6515		3	SNE	0.31	A	25	O	0.1	250	2.0 m	390	*	3.5				2.0	AUD	92/29
★ MPS6516		3	SPE	0.31	A	40	O	0.1	50	2.0 m	200	*	4.0				2.0	AUD	92/29
★ MPS6517		3	SPE	0.31	A	40	O	0.1	90	2.0 m	200	*	4.0				2.0	AUD	92/29
★ MPS6518		3	SPE	0.31	A	40	O	0.1	150	2.0 m	340	*	4.0				2.0	AUD	92/29
★ MPS6519		3	SPE	0.31	A	25	O	0.1	250	2.0 m	340	*	4.0				2.0	AUD	92/29
★ MPS6520		3	SNE	0.31	A	25	O	0.1	200	2.0 m	390	*	3.5				3.0	AUD	92/29
★ MPS6521		3	SNE	0.31	A	25	O	0.1	300	2.0 m	390	*	3.5				3.0	AUD	92/29
★ MPS6522		3	SPE	0.31	A	25	O	0.1	200	2.0 m	340	*	3.5				3.0	AUD	92/29
★ MPS6523		3	SPE	0.31	A	25	O	0.1	300	2.0 m	340	*	3.5				3.0	AUD	92/29
★ MPS6530		3	SNA	0.31	A	40	O	0.6	40	100 m	390	*	5.0			.5		100 m	92/29
★ MPS6531		3	SNA	0.31	A	40	O	0.6	90	100 m	390	*	5.0			.3		100 m	92/29
★ MPS6532		3	SNA	0.31	A	30	O	0.6	30	100 m	390	*	5.0			.5		100 m	92/29
★ MPS6533		3	SPA	0.31	A	40	O	0.6	40	100 m	260	*	6.0			.5		100 m	92/29
★ MPS6534		3	SPA	0.31	A	40	O	0.6	90	100 m	260	*	6.0			.3		100 m	92/29
★ MPS6535		3	SPA	0.31	A	30	O	0.6	30	100 m	260	*	6.0			.5		100 m	92/29
★ MPS6539		3	SNF	0.31	A	20	O		20	4.0 m	500	T					4.5	100 M	92/29
★ MPS6540		3	SNA	0.31	A	30	O		25	2.0 m	350	T				.5		10 m	92/29
★ MPS6542			SNA	0.31	A	20	O	0.1	25	2.0 m	700	T	1.5						92/29
★ MPS6543		3	SNA	0.31	A	25	O		25	4.0 m	750	T	1.0			.35		10 m	92/29
★ MPS6544		3	SNA	0.31	A	45	O		20	30 m						.5		30 m	/29A
★ MPS6545		3	SNA	0.31	A	45	S		20	30 m						.5		30 m	/29A
★ MPS6546		3	SNA	0.31	A	25	O	0.05	20	2.0 m	600	T				.35		10 m	92/29
★ MPS6547		3	SNA	0.31	A	25	O	0.05	20	2.0 m	600	T				.35		10 m	92/29
★ MPS6548		3	SNA	0.31	A	25	O		25	4.0 m	650	T				.5		4.0 m	92/29
★ MPS6560		3	SNA	.625	A	25	O	0.5	50	500 m	60	T	30			0.5	10	500 m	92/29
★ MPS6561		3	SNA	.625	A	20	O	0.6	50	350 m	60	T	30			0.5	10	350 m	92/29
★ MPS6562		3	SPA	.625	A	25	O	0.5	50	500 m	60	T	30			0.5	10	500 m	92/29
★ MPS6563		3	SPA	.625	A	20	O	0.6	50	350 m	60	T	30			0.5	10	350 m	92/29
★ MPS6565		3	SNA	0.31	A	45	O	0.2	40	10 m	200	T	3.5			.4		10 m	92/29
★ MPS6566		3	SNA	0.31	A	45	O	0.2	100	10 m	200	T	3.5			.4		10 m	92/29
★ MPS6567		3	SNA	0.31	A	40	O		25	10 m						.5		10 m	92/29
★ MPS6568		3	SNF	0.31	A	20	O		20	4.0 m	375	T				20	3.3	200 M	92/29
★ MPS6568A		3	SNF	0.31	A	20	O		20	4.0 m	375	T				20	3.3	200 M	92/29
★ MPS6569		3	SNF	0.31	A	20	O		20	4.0 m	300	T				22	6.0	45 M	/29A
★ MPS6570		3	SNF	0.31	A	20	O		20	4.0 m	300	T				22	6.0	45 M	/29A
★ MPS6571		3	SNE	0.31	A	20	O	0.05	250	100 u	50	T	4.5				1.2	100 H	92/29
★ MPS6573		3	SNA	0.31	A	35	O	0.1	200	10 m	200	T	12			.5		10 m	92/29
★ MPS6574		3	SNA	0.31	A	35	O	0.1	100	1.0 m	200	T	12			.5		10 m	92/29
★ MPS6575		3	SNA	0.31	A	45	O	0.1	200	10 m	200	T	12			.5		10 m	92/29
★ MPS6576		3	SNA	0.31	A	45	O	0.1	100	1.0 m	200	T	12			.5		10 m	92/29
★ MPS6590			SNE	0.31	A	80	O	0.25	40	10 m							3.0	AUD	92/29
★ MPS6591			SNE	0.31	A	50	O	0.25	40	10 m							3.0	AUD	92/29
★ MPS8000		3	SNH	.625	A	60	S	0.5	30	100 m						12		27 M	92/29
★ MPS8001		3	SNA	0.35	A	25	O	0.1	40	10 m	100	T							92/29
★ MPS8097			SNE	0.35	A	40	O	0.2	250	100 u	200	T	4.0				8.0	100 H	92/29
★ MPS8098		3	SNA	0.35	A	60	O	0.2	100	1.0 m	150	T	6.0						92/29
★ MPS8099		3	SNA	0.35	A	80	O	0.2	100	1.0 m	750	T	6.0						92/29
★ MPS8598		3	SPA	0.35	A	60	O	0.2	100	1.0 m	150	T	8.0						92/29
★ MPS8599		3	SPA	0.35	A	80	O	0.2	100	1.0 m	150	T	8.0						92/29
★ MP110		3	GPA	106	C	65	X	7.0	74	1.0 A	320K	*				.5		2.0 A	/11
★ MP110B		3	GPA	106	C	40	O	25	55	5.0 A	500	K				.5		5.0 A	/11
★ MP500A			GPA	170	C	30	O	60	30	15 A	2.0K	E				.2		15 A	68/7
★ MP501A			GPA	170	C	45	O	60	30	15 A	2.0K	E				.2		15 A	68/7
★ MP502A			GPA	170	C	60	O	60	30	15 A	2.0K	E				.2		15 A	68/7
★ MP504A			GPA	170	C	30	O	60	50	15 A	2.0K	E				.2		15 A	68/7
★ MP505A			GPA	170	C	45	O	60	50	15 A	2.0K	E				.2		15 A	68/7
★ MP506A			GPA	170	C	60	O	60	50	15 A	2.0K	E				.2		15 A	68/7
★ MP525			GPA	106	C	60	X	7.0	30	3.0 A									/3
★ MP600		3	GPA	85	C	50	O	2.5	50	5.0 A						.75		25 A	/11A
★ MP601		3	GPA	85	C	60	O	2.5	50	5.0 A						.75		25 A	/11A
★ MP602		3	GPA	85	C	70	O	2.5	50	5.0 A						.75		25 A	/11A
★ MP603		3	GPA	85	C	80	O	2.5	50	5.0 A						.75		25 A	/11A
★ MP800			GPA	250	C	60	O	150	15	150 A						.3		150 A	/11A
★ MP801			GPA	250	C	45	O	150	15	150 A						.3		150 A	
★ MP1612			GPA	85	C	100	S	20	25	10 A						.3		10 A	/11A
★ MP1612A			GPA	85	C	140	S	20	25	10 A						.3		10 A	/11A
★ MP1612B			GPA	85	C	160	S	20	25	10 A						.3		10 A	/11A
★ MP1613		3	GPA	85	C	75	O	7.0	40	1.0 A						.25		3.0 A	/11
★ MP2000A		3	GPG	106	C	30	O	25	25	8.0 A	4.30K	*		1100/2100		.6		25 A	/11A

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF @ f dB Max / I_C/I_B @ I_C	Unit	PACKAGE To-Case No. No.
★ MP2060		3	GPA	85	C	25	O	7.0	30	3.0 A	600K	*				.25		3.0 A	/11A
★ MP2061		3	GPA	85	C	35	O	7.0	30	3.0 A	600K	*				.25		3.0 A	/11A
★ MP2062		3	GPA	85	C	50	O	7.0	30	3.0 A	600K	*				.25		3.0 A	/11
★ MP2063		3	GPG	85	C	60	O	7.0	30	3.0 A	600K	*		*1100/2100*		.25		3.0 A	/11
★ MP2100A		3	GPA	106	C	60	O	2.5	25	8.0 A	430K	*				.6		25 A	/11A
★ MP2200A		3	GPG	106	C	80	O	25	25	8.0 A	430K	*		*1100/2100*		.6		25 A	/11A
★ MP2300A		3	GPG	106	C	100	O	25	25	8.0 A	430K	*		*1100/2100*		.6		25 A	/11A
★ MP2400A		3	GPG	106	C	120	O	25	25	8.0 A	430K	*		*1100/2100*		.6		25 A	/11A
★ MP3730		3	GPA	56	C	200	S	5.0	10	50 m	1.0	T				.5		50 m	/11A
★ MP3731		3	GPA	56	C	320	S	10	15	6.0 A	1.0	T				.5		50 m	/11A
★ MQ930		3	**SNA**	0.4	A	45	O	0.03	100	10 U	260*	T	6.0			**.35**	**10**	**1.0**	/607
★ MQ982		3	**SPA**	0.4	A	50	O	0.6	40	150 m	200	T	8.0						/607
★ MQ1120		3	**SPA**	0.4	A	30	O	0.5	50	10 m	200	T	8.0						/607
★ MQ1129		3	**SNA**	0.4	A	30	O	0.5	100	10 m	200	T	8.0						/607
★ MQ2218		3	**SNA**	0.4	A	30	O	0.5	40	150 m	200	T	8.0			.4		150 m	/607
★ MQ2218A		3	**SNA**	0.4	A	30	O	0.5	40	150 m	200	T	8.0						/607
★ MQ2219		3	**SNA**	0.4	A	30	O	0.5	100	150 m	200	T	8.0						/607
★ MQ2219A		3	**SNA**	0.4	A	30	O	0.5	100	150 m	200	T	8.0						/607
★ MQ2369		3	**SNS**	0.40	A	15	O	0.5	40	10 m	500	T	4.0	*15/20*		.25	*10*	*10 m*	/607
★ MQ2484		3	**SNE**	0.4	A	60	O	0.03	100	10 U	260*	T	6.0				**3.0**	**AUD**	/607
★ MQ2904		3	**SPG**	0.4	A	40	O	0.6	40	150 m	200	T	8.0	*45/130*		.4		150 m	/607
★ MQ2905A		3	**SPG**	0.4	A	60	O	0.6	100	150 m	200	T	8.0	*45/130*		.4		150 m	/607
★ MQ3251		3	**SPA**	0.40	A	40	O	0.05	100	1.0 m	300	T	6.0			.25	*10*	*10 m*	/607
★ MQ3467		3	**SPG**	0.40	A	40	O	1.5	20	500 m	150	T	20	*40/110*		*0.5*	*10*	*500 m*	/607
★ MQ3725		3	**SNG**	0.40	A	40	O	1.0	50	100 m	200	T	10	*45/75*		*.26*	*10*	*100 m*	/607
★ MQ3762		3	**SPG**	0.40	A	40	O	1.5	20	1.0 A	150	T	20	*40/110*		*1.0*	*10*	*1.0 A*	/607
★ MQ3798	MQ3798	3	**SPA**	0.40	A	60	O	0.50	150	100 u	450*	T	4.0			*0.2*	*10*	*100 u*	/607
★ MQ3799		3	**SPA**	0.40	A	60	O	0.50	300	100 u	450*	T	4.0			*0.2*	*10*	*100 u*	/607
★ MQ3799A			**SPM**	0.40	A	60	O	0.05	300	100 u	450	*	4.0	*/10*		*0.2*		*100 u*	/607
★ MQ6001		3	**SCG**	0.40	A	30	O	0.5	40	150 m	200	T	8.0	*60/350*		*0.4*	*10*	*150 m*	/607
★ MQ6002		3	**SCG**	0.40	A	30	O	0.5	100	150 m	200	T	8.0	*60/350*		*0.4*	*10*	*150 m*	/607
★ MQ7001		3	SPA	0.4	A	30	O	0.6	70	150 m	200	T	8.0						/607
★ MQ7003		3	**SNA**	0.40	A	40	O	0.05	50	10 m	200	T	6.0			*.35*	*10*	*1.0 m*	/607
★ MQ7004		3	**SNA**	0.40	A	13	O	0.2	30	10 m	675*	T	4.0			*0.4*	*10*	*10 m*	/607
★ MQ7007		3	**SNA**	0.4	A	40	O	0.2	30	1.0 m	300	T	8.0			*1.0*	*10*	*50 m*	/607
★ MQ7021		3	**SCG**	0.40	A	40	O	0.05	50	10 m	200	T	6.0	*28*/72**		*.35*	*10*	*10 m*	/607
★ MRF207		3	SNP	3.5	C	36	S	0.4	5.0	100 m				**1.0/**		**8.2**		**225 M**	39/79
★ MRF208		3	SNP	37.5	C	36	S	2.0	5.0	250 m				**10/**		**10**		**225 M**	/145
★ MRF209		3	SNP	50	C	36	S	4.0	5.0	500 m				**25/**				**225 M**	/145
★ MRF215		3	SNP	31	C	36	S	2.5	5.0	500 m			85	**20/**		**8.2**		**175 M**	/278
★ MRF216		3	SNP	75	C	36	S	6.0	5.0	1.0 A			200	**40/**		**6.7**		**175 M**	/278
★ MRF221		2	SNP	31	C	36	S	2.5	5	500 m			85	**15/**		**6.3**		**175 M**	/211
★ MRF225		3	SNP	3.5	C	36	S	0.25	15	100 m			8.0	**1.5/**		**9.0**		**225 M**	39/79
★ MRF226		3	SNP	45	C	36	B	2.5	5	250 m				**13/**		**9.0**		**225 M**	/145
★ MRF227			SNP			36	S							**3.0/**		**13**		**225 M**	39/
★ MRF230		3	SNP	5.0	C	36	S	0.5	5	250 m			25	**1.5/**		**10**		**90 M**	39/79
★ MRF231		3	SNP	10	C	36	S	1.0	5	250 m			25	**3.5/**		**10**		**90 M**	/145
★ MRF232		3	SNP			36	S							**7.5/**		**9**			/145
★ MRF233		3	SNP	50	C	36	S	3.5	5	1.0 A			120	**15/**		**10**		**90 M**	/145
★ MRF234		3	SNP	70	C	36	S	4.0	5	1.0 A			120	**25/**		**9.5**		**90 M**	/145
★ MRF304		3	SNP	30	C	60	S	2.0	10	500 m			25	**10/**		**9.0**		**400 M**	/278
★ MRF305		3	SNP	70	C	60	S		10	500 m			45	**30/**		**8.0**		**400 M**	/278
★ MRF306			SNP			60	S							**50/**		**5.2**		**400 M**	/278
★ MRF307			SNP			60	S							**50/**		**5.2**		**400 M**	/293
★ MRF401		3	SNP	50	C	60	S	3.3	10	1.0 A			85	**25/**		**13**		**30 M**	/145
★ MRF501		3	SNF	0.2	A	15	O	0.05	30	1.0 m	1000	T				**15**	**4.5**	**200 M**	72/20
★ MRF502		3	SNF	0.2	A	15	O	0.05	40	1.0 m	1200	T				**17**	**4.0**	**200 M**	72/20
★ MRF509		3	SNP	2.0	C	30	O	0.4	30	50 m	500	T	3.0	**1.0/**		**10**		**400 M**	/207
★ MRF511		3	SNF	5.0	C	25	O	0.25	25	80 m	1500	T	4.5			**10**	**10**	**200 M**	/144
★ MRF603		3	SNP	30	C	36	S	2.0	5.0	500 m			85	**10/**		**10**		**175 M**	/145
★ MRF607		3	SNP	3.5	C	36	S	0.33	20	50 A			15	**1.75/**		**12**		**175 M**	39/79
★ MRF618		3	SNP	45	C	36	S	2.5	30	1.0 A			80	**15/**		**6.0**		**470 M**	/278
★ MRF619		3	SNP	115	C	36	S	6.0	30	4.0 A			95	**25/**		**5.2**		**470 M**	/278
★ MRF620		3	SNP	115	C	36	S	8.0	30	4.0 A			95	**35/**				**470 M**	/278
★ MRF621		3	SNP	146	C	36	S	11	10	5.0 A			130	**45/**				**470 M**	/278
★ MRF628		3	SNP	3.0	A	36	S	0.2	20	100 m			10	**0.5/**		**10**		**470 M**	/249
★ MRF816		3	SNP	2.0	C	36	S	.175	5	50 m			5.0	**0.75/**		**10**		**900 M**	/249
★ MRF817		3	SNP	5	C	36	S	0.4	40	100 m			15	**2.5/**		**6.2**		**900 M**	/244
★ MRF818		3	SNP	15	C	36	S	1.5	40	200 m			25	**8.0/**				**900 M**	/244
★ MRF823			SNP			36	S							**4.0/**		**8.0**		**900 M**	/278

TYPE NO.	REPLACEMENT	VOL.	ID	P_D Watts	Ref. Point	V_{CE} Volts	Subscript	I_C Amp Max	h_{FE} @ I_C Min	Unit	f_T MHz Min	Sub.	C_{ob} pF Max	P_{out} Watts Min / t_{on} ns Max	ΔV_{BE} mV Max / t_{off} ns Max	Gp dB Min / $V_{CE(sat)}$ Volts Max	NF dB Max @ $\frac{I_C}{I_B}$	f & I_C	Unit	PACKAGE To-Case No. No.
★ MRF824			SNP			36	S							13/		5.5		900	M	/278
★ MRF825			SNP			36	S							25/				900	M	/278
★ MRF5174		3	SNP	5.0	A	60	S	0.5	10	100 m			8.0	2.0/		12		400	M	/244
★ MRF5175		3	SNP	12	A	60	S	1.0	10	250 m			15	5.0/		11		400	M	/244
★ MRF5176		3	SNP	30	A	60	S	2.0	10	500 m			25	15/		10		400	M	/244
★ MRF5177		3	SNP	58	C	60	S	4.0	10	100 m			50	30/		6.0		400	M	/215
★ MRF8004		3	SNH	5.0	C	30	O	1.0	10	400 m			70			10		27	M	

TABLE 8 - UNIJUNCTION TRANSISTORS

Short-form specifications for standard and programmable unijunction transistors.



TYPE NO.	REPLACEMENT	VOL.	ID	V_{GKF} Volts Max / V_{BB} Volts Max	I_T Amp Max / I_E Amp Max	η Min	η Max	I_P μA Max	I_V mA Min	R_G	UNIT	I_{GAO} / I_{EO}	UNIT	I_T @ t_W Pulse Amp Max	μs	V_F @ I_F Volts Max / V_{EB1} @ I_E Volts Max	UNIT	PACKAGE To-Case No.
2N489			UNS	60		0.62/		20	8.0			.2 u				5.0	50 m	
2N489A			UNS	60		0.62/		15	8.0			.2 u				4.0	50 m	
2N489B			UNS	60		0.62/		6.0	8.0			0.2 u				4.0	50 m	
2N490			UNS	60		0.62/		15	8.0			12 u				4.0	50 m	
2N490A			UNS	60		0.62/		15	8.0			12 u				4.0	50 m	
2N490B			UNS	60	6	0.62/		6.0	8.0			0.2 u				4.0	50 m	18/22A
2N490C			UNS	60		0.51/0.62		2.0	8.0			u		2.0		4.0	50 m	
2N491			UNS	60		0.68/		20	8.0			12 u				5.0	50 m	
2N491A			UNS	60		0.68/		15	8.0			12 u				4.3	50 m	
2N491B			UNS	60		0.68/		6.0	8.0			12 u				4.3	50 m	
2N492			UNS	60		0.68/		20	8.0			12 u				5.0	50 m	
2N492A			UNS	60		0.68/		15	8.0			12 u				4.3	50 m	
2N492B			UNS	60		0.68/		6.0	8.0			12 u				4.3	50 m	
2N492C			UNS	65		0.56/0.68		2.0	8.0			2.0 u		2.0		4.3	50 m	
2N493			UNS	60		0.75/		20	8.0			12 u				5.0	50 m	
2N493A			UNS	60		0.75/		15	8.0							5.0	50 m	
2N493B			UNS	60		0.75/		6.0	8.0			200 n				5.0	50 m	
2N494			UNS	60		0.75/		20	8.0			12 u				5.0	50 m	
2N494A			UNS	60		0.75/		15	8.0			12 u				4.6	50 m	
2N494B			UNS	60		0.75/		6.0	8.0			200 n				4.6	50 m	
2N494C			UNS	65		0.62/0.75		2.0	8.1			2.0 u		2.0		4.6	50 m	
2N1671			UNS	30		0.62/		25	8.0			12 u				5.0	50 m	
2N1671A			UNS	30		0.62/		25	8.0			12 u				5.0	50 m	
2N1671B			UNS	30		0.62/		6.0	8.0			200 n				5.0	50 m	
2N1671C			UNS	35		0.47/0.62		2.0	8.0			30 n		2.0		5.0	50 m	
2N2160			UNS	30		0.47/0.80		25	8.0			12 u				5.0	50 m	
2N2417			UNS	60		0.62/		20	8.0			12 u				5.0	50 m	
2N2417A			UNS	60		0.62/		20	8.0			12 u				4.0	50 m	
2N2417B			UNS	30		0.51/0.62		6.0	8.0			200 n				4.0	50 m	
2N2418			UNS	60		0.62/		20	8.0			12 u				5.0	50 m	
2N2418A			UNS	60		0.62/		20	8.0			12 u				4.0	50 m	
2N2418B			UNS	60		0.51/0.62		6.0	8.0			200 n				4.0	50 m	
2N2419			UNS	60		0.68/		20	8.0			12 u				5.0	50 m	
2N2419A			UNS	60		0.68/		20	8.0			12 u				4.3	50 m	
2N2419B			UNS	30		0.56/0.68		6.0	8.0			200 n				4.3	50 m	
2N2420			UNS	60		0.68/		20	8.0			12 u				5.0	50 m	
2N2420A			UNS	60		0.68/		20	8.0			12 u				4.3	50 m	
2N2420B			UNS	30		0.56/0.68		6.0	8.0			200 n				4.3	50 m	
2N2421			UNS	60		0.75/		20	8.0			12 u				5.0	50 m	
2N2421A			UNS	60		0.75/		20	8.0			12 u				4.6	50 m	
2N2421B			UNS	30		0.62/0.75		6.0	0.2			200 n				4.6	50 m	
2N2422			UNS	60		0.75/		20	8.0			12 u				5.0	50 m	
2N2422A			UNS	60		0.75/		20	8.0			12 u				4.6	50 m	
2N2422B			UNS	30		0.62/0.75		6.0	8.0			200 n					m	
★ 2N2646		1	UNS	35	0.05	0.56/0.75		5.0	4.0			12 u		2.0	2.0	4*	50 m	18/22
★ 2N2647		1	UNS	35	0.05	0.68/0.82		2.0	8.0			200 n				4*	50 m	18/22
2N2840	2N720A		UNS	30		0.4/0.85		10	0.7			1.0 u					50 m	
2N3406			UNS	30					8.0								m	
2N3479			UNS	30		0.47/0.62		20	6.0			12 u				5.0	50 m	
2N3480			UNS	30		0.75/		15	4.0			12 u				5.0	50 m	
2N3481			UNS	30		0.85/		15	6.0			12 u				5.0	50 m	
2N3482			UNS	30		0.51/0.62		2.0	8.0			20 n				5.0	50 m	
2N3483			UNS	30		0.72/		2.0	8.0			1.0 u				5.0	50 m	
2N3484			UNS	30		0.85/		2.0	8.0			200 n				5.0	50 m	
2N3679			UNS			0.80/			4.2								m	
★ 2N3980			UNS	35	0.05	0.68/0.82		2.0	1.0			1.0 u		1.0		3.0	50 m	18/22
★ 2N4851		1	UNS	35	0.05	0.56/0.75		2.0	2.0			100 n		1.5		3*	50 m	18/22
★ 2N4852		1	UNS	35	0.05	0.70/0.85		2.0	4.0			100 n		1.5		3*	50 m	18/22
★ 2N4853		1	UNS	35	0.05	0.70/0.85		0.4	6.0			50 n		1.5		3*	50 m	18/22
★ 2N4870		1	UNS	35	0.05	0.56/0.75		5.0	2.0			1.0 u		1.5		3*	50 m	92/29
★ 2N4871			UNS	35	0.05	0.70/0.85		5.0	4.0			1.0 u		1.5		3*	50 m	92/29
2N4891			UNS	30		0.55/		5.0	2.0			50 n				4.0	50 m	
2N4892			UNS	30		0.51/		2.0	4.0			10 n				4.0	50 m	
2N4893			UNS	30		0.55/		2.0	2.0			10 n				4.0	50 m	
2N4894			UNS	30		0.74/		1.0	2.0			10 n				4.0	50 m	
2N490B			UNS	60		0.62/		6.0	8.0			0.2 u				4.0	50 m	
★ 2N4948		1	UNS	30		0.55/		2.0	2.0			10 n				2.5	50 m	
★ 2N4949		1	UNS	30		0.74/		1.0	2.0			10 n				2.5	50 m	
★ 2N5431			UNS			0.72/0.80		4.0	2.0							3.0	50 m	
2N6027		2	UNP	40	0.2			5.0	0.07	10 K		10 n		2.0	20	1.5	50 m	92/29

TYPE NO.	REPLACEMENT	VOL.	ID	V_{GKF} Volts Max / V_{BB} Volts Max	I_T Amp Max / I_E Amp Max	η Min	η Max	I_P μA Max	I_V mA Min	R_G	UNIT	I_{GAO} / I_{EO}	UNIT	I_T @ Pulse Amp Max	t_W μs	V_F @ I_F Volts Max / V_{EB1} Volts Max	@ I_E	UNIT	PACKAGE To-Case No. No.
2N6028		2	UNP	4															
2N6114		2	UNS	*30*	*0.15*	0.58/0.62		5.0	1.0			*100 n*		2.0		*1.5*	*50 m*		18/22A
★ 2N6115		2	UPS	*30*	*0.15*	0.58/0.62		15	1.0			*10 n*				*1.5*	*50 m*		18/22A
★ 2N6116		2	UNP	**40**	**0.2**			5.0		10 K		**5.0 n**		2.0	20	**1.5**	**50 m**		18/22
★ 2N6117		2	UNP	**40**	**0.2**			2.0		10 K		**5.0 n**		2.0	20	**1.5**	**50 m**		18/22
★ 2N6118		2	UNP	**40**	**0.2**			1.0		10 K		**5.0 n**		2.0	20	**1.5**	**50 m**		18/22
2N6120			UNP	**40**	**.3**			1.0	.025	10 K					8.0	**10**	**1. 0**		50J/
2N6137			UNP	**40**	**.3**			1.0	.07	10 K				8.0	10	**1.0**	**50 m**		
2N6138			UNP	**100**	**0.3**			5.0	.07	10 K				8.0	10	**1.0**	**50 m**		
★ MPU131		3	UNP	**40**	**0.2**			5.0	0.07	10 K		**5.0 n**		2.0	20	**1.5**	**50 m**		/29
★ MPU132		3	UNP	**40**	**0.2**			2.0	0.05	10 K		**5.0 n**		2.0	20	**1.5**	**50 m**		/29
★ MPU133		3	UNP	**40**	**0.2**			1.0	0.05	10 K		**5.0 n**		2.0	20	**1.5**	**50 m**		/29
★ MPU231	2N6116		UNP	**40**	**0.2**			5.0	0.07	10 K		**5.0 n**		2.0	20	**1.5**	**50 m**		
★ MPU232	2N6116		UNP	**40**	**0.2**			2.0	0.05	10 K		**5.0 n**		2.0	20	**1.5**	**50 m**		
★ MPU233	2N6116		UNP	**40**	**0.2**			1.0	0.05	10 K		**5.0 n**		2.0	20	**1.5**	**50 m**		
★ MU10			UNS	*35*	*0.05*	0.50/0.85		5.0	1.0			*1.0 u*		1.0		*2**	*50 m*		92/29
★ MU20			UNS	*35*	*0.05*	0.56/0.85		2.0	1.0			*200 n*		1.0		*2**	*50 m*		18/22A
★ MU851		3	UNS	*28*	*0.05*	0.56/0.75		2.0	2.0			*100 n*		1.5		*3**	*50 m*		/28
★ MU852		3	UNS	*28*	*0.05*	0.70/0.85		2.0	4.0			*100 n*		1.5		*3**	*50 m*		/28
★ MU853		3	UNS	*28*	*0.05*	0.70/0.85		0.4	4.0			*50 n*		1.5		*3**	*50 m*		/28
★ MU2646		3	UNS	*35*	*0.05*	0.56/0.75		5.0	4.0			*12 u*		2.0		*4**	*50 m*		18/22
★ MU2646M		3	UNS	*35*	*0.05*	0.56/0.75		5.0	2.0			*12 u*		2.0		*4**	*50 m*		18/22
★ MU4891		3	UNS	*30*	*0.05*	0.55/0.82		5.0	2.0			*10 n*		1.0		*4.0*	*50 m*		/28
★ MU4892		3	UNS	*30*	*0.05*	0.51/0.69		2.0	2.0			*10 n*		1.0		*4.0*	*50 m*		/28
★ MU4893		3	UNS	*30*	*0.05*	0.55/0.82		2.0	2.0			*10 n*		1.0		*4.0*	*50 m*		/28
★ MU4894		3	UNS	*30*	*0.05*	0.74/0.86		1.0	2.0			*10 n*		1.0		*4.0*	*50 m*		

TABLE 9 - FIELD-EFFECT TRANSISTORS

Short-form specifications for junction and MOS field-effect transistors.

KEY

TYPE	POLARITY	CONST.	NEAREST EQUIVALENT	REFERENCE	I_{DSS} Min mA	I_{DSS} Max mA	I_{GSS} / I_{DGO}* nA	Breakdown Voltage $V_{(BR)}$ Volts	Breakdown Voltage Sub-script	y_{fs} Min μmhos	y_{fs} Max μmhos	C_{iss} pF	NF @ f dB	NF @ f μV*/√Hz	NF @ f Units	NOTE
					* nA					*mmhos						D – Dual MP – Matched Pair
Numerical Listing of Registered Type Numbers *Available from Motorola	N – n-channel P – p-channel	J – Junction FET M – MOS FET	Type number of recommended replacement or nearest electrical equivalent	First type number on data sheet where the EIA type or replacement part is located.	Minimum and Maximum Drain Current with gate connected to source	Maximum Gate Current (Leakage) with drain connected to source *Maximum leakage from drain to gate with source open		Minimum Breakdown Voltage (Subscript defines conditions) **GS** – Gate to source, drain connection not specified **GSS** – Gate to source, drain connected to source **GD** – Gate to drain, source connection not specified **GDS** – Gate to drain, source connected to drain **DGO** – Drain to gate, source open **DGS** – Drain to gate, source connected to drain **DS** – Drain to source, gate connection not specified **DSX** – Drain to source, gate biased to cutoff or beyond				Minimum and Maximum Forward Transadmittance	Maximum Input Capacitance			Noise Figure in dB or * μV/√Hz at a specified frequency frequency units: H – Hz K – kHz M – MHz		

TYPE	POLARITY	CONST.	REPLACEMENT	REFERENCE	I_{DSS} Min mA	I_{DSS} Max mA	I_{GSS} I_{DGO}* nA	Breakdown Voltage $V_{(BR)}$ Volts	Breakdown Voltage Sub-script	y_{fs} Min μmhos	y_{fs} Max μmhos	C_{ISS} pF	NF @ f dB $\frac{\mu V^*}{\sqrt{Hz}}$	NF @ f Units	NOTE
					*nA					*mmhos					
2N2386	P	J	2N3330	2N3330			10	20	GS	1000		50			
2N2386A	P	J	2N5267	2N5265	1.0	15	10	20	DGO	2200	5000	10			
2N2497	P	J	2N5267	2N5265	1.0	5.0	10	20	GD	1000	2000	32	3.0	1.0k	
2N2498	P	J	2N3330	2N3330	2.0	6.0	10	20	GD	1500	3000	32	3.0	1.0k	
2N2499	P	J	2N3909A	2N3330	5.0	15	10	20	GD	2000	4000	32	4.0	1.0k	
2N2500	P	J	2N5267	2N5265	1.0	6.0	10	20	GS	1000	2000	32	1.0	1.0k	
2N2606	P	J	2N5473	2N5471	0.1	0.5	1.0	30	GDS	110		6.0	3.0	1.0k	
2N2607	P	J	2N5475	2N5471	0.3	1.5	3.0	30	GDS	330		10	3.0	1.0k	
2N2608	P	J	2N3330	2N3330	0.9	4.5	10	30	GDS	1000		17	3.0	1.0k	
2N2609	P	J	2N3330	2N3330	2.0	10	30	30	GDS	2500		30	3.0	1.0k	
2N2620	N	J					100	50	DGO						
2N2794	P	J			1.5	5.0	10	20	DGO						
2N2841	P	J	2N5471	2N5471	0.025	0.125	1.0			60		6.0	3.0	1.0k	
2N2842	P	J	2N5472	2N5471	0.065	0.325	3.0			180		10	3.0	1.0k	
2N2843	P	J	2N5265	2N5265	0.2	1.0	10			540		17	3.0	1.0k	
2N2844	P	J	2N5265	2N5265	1.0	2.2	30			1400		30	3.0	1.0k	
2N3066	N	J	MFE2095	MFE2093	0.8	4.0	1.0	50	DGO	400	1000	10	3.0	1.0k	
2N3066A	N	J			0.8	4.0	1.0	50	DGO	400	1000	10	0.25	1.0k	
2N3067	N	J	MFE2093	MFE2093	0.2	1.0	1.0	50	DGO	400		18	3.0	1.0k	
2N3067A	N	J			0.2	1.0	1.0	50	DGO	300	1000	10	0.25	1.0k	
2N3068	N	J	MFE2093	MFE2093	0.05	0.25	1.0	50	DGO	200		18	3.0	1.0k	
2N3068A	N	J	MFE2093	MFE2093	0.05	0.25	1.0	50	DGO	200	1000	10	0.25	1.0k	
2N3069	N	J	2N4220	2N4220	2.0	10	1.0	50	DGO	1000		15	3.0	1.0k	
2N3069A	N	J			2.0	10	1.0	50	DGO	1000	2500	15	0.25	1.0k	
2N3070	N	J	2N4220A	2N4220	0.5	2.5	1.0	50	DGO	750		15	3.0	1.0k	
2N3070A	N	J			0.5	2.5	1.0	50	DGO	750	2500	15	0.25	1.0k	
2N3071	N	J	2N4220A	2N4220	0.1	0.6	1.0	50	DGO	500	2500	15	3.0	1.0k	
2N3084	N	J	MFE2095	MFE2093	0.8	3.0	0.1	15	DGO	400	2000	14			
2N3085	N	J	MFE2095	MFE2093	0.8	3.0	0.1	15	DGO	400	2000	14			
2N3086	N	J	MFE2095	MFE2093	0.8	3.0	1.0	30	DGS	400	2000	14			
2N3087	N	J	MFE2095	MFE2093	0.8	3.0	1.0	30	DGS	400	2000	14			
2N3088	N	J	MFE2094	MFE2093	0.5	2.0	1.0	10	DGS	300	2000	14	3.0		
2N3088A	N	J	MFE2094	MFE2093	0.5	2.0	1.0	10	DGS	300	2000	14	0.5	10H	
2N3089	N	J	MFE2094	MFE2093	0.5	2.0	1.0	10	DGS	300	2000	14	3.0		
2N3089A	N	J	MFE2094	MFE2093	0.5	2.0	1.0	10	DGS	300	2000	14	0.5	10H	
2N3112	P	J	2N5471	2N5471	0.035	0.175	0.05	20	GDS	50	115	3.5			
2N3113	P	J	2N5471	2N5471	0.035	0.175	0.05	20	GDS	50	115	2.0			
2N3277	P	J	2N5473	2N5471	0.15	0.5	0.4	25	DGO	100		3.0			
2N3278	P	J	2N5475	2N5471	0.4	0.9	0.4	25	DGO	150		3.0			
2N3328	P	J	2N5473	2N5471	1.0		1.0	20	GSS	100		3.0	3.0		
2N3329	P	J	2N5266	2N5265	1.0	3.0	10	20	GSS	1000	2000	20	3.0		
★2N3330	P	J		2N3330	2.0	6.0	10	20	GSS	1500	3000	20	3.0		
2N3331	P	J	2N3330	2N3330	5.0	15	10	20	GSS	2000	4000	20	4.0		
2N3332	P	J	2N5267	2N5265	1.0	6.0	10	20	GSS	1000	2200	20	1.0		
2N3333	P	J			0.3	1.0	10	20	GSS	600	1800	30			Dual
2N3334	P	J			0.3	1.0	10	20	GSS	600	1800	30			Dual
2N3335	P	J			0.3	1.0	10	20	GSS	600	1800	30			Dual
2N3336	P	J			0.3	1.0	10	20	GSS	600	1800	30			Dual
2N3365	N	J			0.8	4.0	5.0	40	DGO	250	1000	15			
2N3366	N	J	2N4091		0.2	1.0	5.0	40	DGO	250	1000	15			
2N3367	N	J	2N4091		0.005	0.25	5.0	40	DGO	100	1000	15			
2N3368	N	J	2N4221	2N4220	2.0	12	5.0	40	DGO	1000	4000	20			
2N3369	N	J	2N4220A	2N4220	0.5	2.5	5.0	40	DGO	600	2500	20			
2N3370	N	J	MFE2093	MFE2093	0.1	0.6	5.0	40	DGO	300	2500	20			
2N3376	P	J	2N3330	2N3330	0.6	6.0	3.0		DGS						
2N3377	P	J	2N3330	2N3330	0.6	6.0	3.0	30	DGS	800	2300	4.0			
2N3378	P	J	2N3330	2N3330	3.0	6.0	3.0	30	DGS	1500	2300	5.0			
2N3379	P	J	2N3330	2N3330	3.0	6.0	3.0	30	DGS	1500	2300	4.0			
2N3380	P	J	2N5268	2N5265	3.0	20	3.0	30	DGS	1500	3000	4.0			
2N3381	P	J	2N5268	2N5265	3.0	20	3.0	30	DGS	1500	3000	4.0			
2N3382	P	J	2N3994	2N3993	3.0	30	15	30	DGS	4500	12500				
2N3383	P	J	2N3994	2N3993	3.0	30	15	30	DGS	4500	12500				
2N3384	P	J	2N3993	2N3993	15	30	15	30	DGS	7500	12500				
2N3385	P	J	2N3993	2N3993	15	30	15	30	DGS	7500	12500				
2N3386	P	J	2N3993	2N3993	13	50	15	30	DGS	7500	12500				
2N3387	P	J	2N3993	2N3993	13	50	15	30	DGS	5000	10000				
2N3436	N	J	2N4222A	2N4220	3.0	15	0.5	50	DGO	2500	10000	18	2.0		
2N3437	N	J	2N4220A	2N4220	0.8	4.0	0.5	50	DGO	1500	6000	18	2.0		
2N3438	N	J	2N4222A	2N4220	0.2	1.0	0.5	50	DGO	800	4500	18	2.0		
2N3452	N	J	MFE2095	MFE2093	0.8	4.0	0.1	50	DGO	200	1200	6.0	2.0		

TYPE	POLARITY	CONST.	REPLACEMENT	REFERENCE	I_{DSS} Min mA	I_{DSS} Max mA	I_{GSS} I_{DGO}* nA	Breakdown Voltage $V_{(BR)}$ Volts	Breakdown Voltage Sub-script	y_{fs} Min μmhos	y_{fs} Max μmhos	C_{ISS} pF	NF @ f dB	NF @ f $\frac{\mu V^*}{\sqrt{Hz}}$	NF @ f Units	NOTE
					* nA					* mmhos						
2N3453	N	J	MFE2094	MFE2093	0.2	1.0	0.1	50	DGO	150	900	6.0	2.0			
2N3454	N	J	MFE2093	MFE2093	0.05	0.25	0.1	50	DGO	100	600	6.0	2.0			
2N3455	N	J	MFE2095	MFE2093	0.8	4.0	0.04	50	DGO	400	1200	5.0	4.0			
2N3456	N	J	MFE2094	MFE2093	0.2	1.0	0.04	50	DGO	300	900	5.0	4.0			
2N3457	N	J	MFE2093	MFE2093	0.05	0.25	0.04	50	DGO	150	600	5.0	4.0			
2N2358	N	J	2N4222A	2N4220	3.0	15	0.25	50	DGO	2500	10000	18	6.0			
2N3459	N	J	2N4220A	2N4220	0.8	4.0	0.25	50	DGO	1500	6000	18	4.0			
2N3460	N	J	2N4220A	2N4220	0.2	1.0	0.25	50	DGO	800	4500	18	4.0			
2N3465	N	J	MFE2095	MFE2093	1.0	5.0	1.0	40	DGO	400	1200	15	5.0			
2N3466	N	J	MFE2095	MFE2093	1.0	5.0	1.0	40	DGO	400	1200	15	5.0			
2N3573	P	J	2N5471	2N5471	0.02	0.1	0.6	25	GSS	100	300	6.0	3.0			
2N3574	P	J	2N5472	2N5471	0.075	0.375	0.6	25	GSS	200	600	6.0	3.0			
2N3575	P	J	2N5474	2N5471	0.2	1.0	0.6	25	GSS	300	900	6.0	3.0			
2N3578	P	J	2N5476	2N5471	0.9	4.5	15	20	GSS	1200	3500	65				
2N3608	P	M	2N4352	2N4352	30	0.025										
2N3609	P	M	MFE3020	MFE3020	35	0.02										
2N3610	P	M	2N4352	2N4352	10	0.02										
2N3631	N	M	2N3797	2N3796	2.0	10		20	DSX	1400	2800	7.5				
2N3684	N	J	2N4221A	2N4221	2.5	7.5	0.1	50	GS	2000	3000	4.0	0.5			
2N3684A	N	J			2.5	7.5	0.1	50	GSS			4.0	0.5	100H		
2N3685	N	J	2N4220A	2N4221	1.0	3.0	0.1	50	GS	1500	2500	4.0	0.5			
2N3685A	N	J			1.0	3.0	0.1	50	GSS			4.0	0.5	100H		
2N3686	N	J	2N4220A	2N4221	0.4	1.2	0.1	50	GS	1000	2000	4.0	0.5			
2N3686A	N	J			0.4	1.2	0.1	50	GSS			4.0	0.5	100H		
2N3687	N	J	2N4220A	2N4221	0.1	0.5	0.1	50	GS	500	1500	4.0	15*			
2N3687A	N	J			0.1	0.5	0.1	50	GSS			4.0	0.5	100H		
2N3695	P	J	2N5267	2N5265	1.25	3.75	0.1	30	GS	1000	1750	5.0	0.2*			
2N3696	P	J	2N5266	2N5265	0.5	1.5	0.1	30	GS	750	1250	5.0	0.2*			
2N3697	P	J	2N5265	2N5265	0.2	0.6	0.1	30	GS	500	1000	5.0	0.2*			
2N3698	P	J	2N5265	2N5265	0.05	0.25	0.1	30	GS	250	750	5.0	0.2*			
2N3796	N	M	2N3796	2N3796	0.5	3.0	0.001	25	DSX	900	1800	6.0	4.0			
2N3797	N	M	2N3797	2N3796	2.0	6.0	0.001	20	DSX	1500	3000	8.0	4.0			
2N3819	N	J	MPF108	MPF108	2.0	20	2.0	25	GSS	2000	6500	8.0				
2N3820	P	J	2N5460	2N5460	0.3	15	20	20	GSS	800	5000	32				
2N3821	N	J		2N3821	0.5	2.5	0.1	50	GSS	1500	4500	6.0	5.0	10H		
★2N3822	N	J		2N3821	2.0	10	0.1	50	GSS	3000	6500	6.0	5.0	10H		
★2N3823	N	J		2N3823	4.0	20	0.5	30	DGS	3500	6500	6.0	2.5	100M		
★2N3824	N	J		2N3821			0.1	50	GSS			6.0				
2N3882	P	M	MFE3003	MFE3003	0.25		0.1	30	DS	1000	2400	4.0	3.0			
2N3909	P	J	2N5460	2N5460	0.3	15	10	20	DGS	1000	5000	32				
2N3909A	P	J	2N5460	2N5460	1.0	15	10	20	GSS	2000		9.0				
2N3921	N	J			1.0	10	0.25	50	GSS	1500	7500	18	2.0	1.0k		Dual
2N3922	N	J			1.0	10	0.25	50	GSS	1500	7500	18	2.0	1.0k		Dual
2N3934	N	J			0.25	1.3	0.1	50	GSS	300	900	7.0	2.0	100H		Dual
2N3935	N	J			0.25	1.3	0.1	50	GSS	300	900	7.0	2.0	100H		Dual
2N3954	N	J			0.5	5.0	0.1	50	GSS	1000		4.0	0.5	100H		Dual
2N3954A	N	J			0.5	5.0	0.1	50	GSS	1000		4.0	0.5	100H		
2N3955	N	J			0.5	5.0	0.1	50	GSS	1000		4.0	0.5	100H		Dual
2N3955A	N	J			0.5	5.0	0.1	50	GSS	1000		4.0	0.5	100H		
2N3956	N	J			0.5	5.0	0.1	50	GSS	1000		4.0	0.5	100H		Dual
2N3957	N	J			0.5	5.0	0.1	50	GSS	1000		4.0	0.5	100H		Dual
2N3958	N	J			0.5	5.0	0.1	50	GSS	1000		4.0	0.5	100H		Dual
2N3966	N	J	2N4221	2N4220	2.0		0.1	30	DGS			6.0				
2N3967	N	J	2N4221A	2N4220	2.5	10	0.1	30	DGS	1600	2400	5.0				
2N3967A	N	J	2N4221A	2N4220	2.5	10	0.1	30	GSS	1600	2400	5.0	1.5	100H		
2N3968	N	J	2N4221A	2N4220	1.0	5.0	0.1	30	DGS	1400	2000	5.0				
2N3968A	N	J	2N4221A	2N4220	1.0	5.0	0.1	30	GSS	1400	2000	5.0	1.5	100H		
2N3969	N	J	2N4220A	2N4220	0.4	2.0	0.1	30	DGS	950	1450	5.0				
2N3969A	N	J	2N4220A	2N4220	0.4	2.0	0.1	30	GSS	950	1450	5.0	1.5	100H		
★2N3970	N	J		2N3970	50	150	0.25*	40	DGS			25				
★2N3971	N	J		2N3970	25	75	0.25*	40	DGS			25				
★2N3972	N	J		2N3970	5.0	30	0.25*	40	DGS			25				
★2N3993	P	J		2N3993	10		1.2*	25	GSS	6000	12000	16				
★2N3994	P	J		2N3993	2.0		1.2*	25	GSS	4000	10000	16				
2N4038	N	M	2N3796	2N3796		0.1		15	DSX							
2N4039	N	M	2N3796	2N3796	0.1	1.5		15	DSX							
2N4065	P	M	2N4352	2N4352		0.005	0.0025	25	GSS			4.5				
★2N4066	P	M		2N4066			0.0025	25	GSS			7.0				
★2N4067	P	M		2N4066		1.0*		30	DSS	2500		7.0				
2N4082	N	J			0.25	1.3	0.1	50		300		7.0				Dual

TYPE	POLARITY	CONST.	REPLACEMENT	REFERENCE	I_{DSS} Min mA	I_{DSS} Max mA	I_{GSS} I_{DGO}* nA	Breakdown Voltage $V_{(BR)}$ Volts	Breakdown Voltage Sub-script	y_{fs} Min μmhos	y_{fs} Max μmhos	C_{ISS} pF	NF @ f dB	NF @ f μV* / √Hz	NF @ f Units	NOTE
					* nA					*mmhos						
2N4083	N	J			0.25	1.3	0.1	50		300		7.0				Dual
2N4084	N	J			1.0	10	0.25	50		1500		18				Dual
2N4085	N	J			1.0	10	0.25	50		1500		18				Dual
2N4088	P	J	MPF161	MPF161	5.0	15	0.1	30	GSS	1000	1600	10	1.5		1.0k	
2N4089	P	J	MPF161	MPF161	2.0	8.0	0.1	30	GSS	800	1300	10	1.5		1.0k	
2N4090	P	J	MPF161	MPF161	0.4	2.5	0.1	30	GSS	500	900	10	1.5		1.0k	
★2N4091	N	J		2N4091	30		0.2*	40	DGO			16				
2N4091A	N	J	2N4091	2N4091	30		0.04	50	GSS			16				
★2N4092	N	J		2N4091	15		0.2*	40	DGO			16				
2N4092A	N	J	2N4092	2N4091	15		0.04	50	GSS			16				
★2N4093	N	J		2N4091	8.0		0.2*	40	DGO			16				
2N4093A	N	J	2N4093	2N4091	8.0		0.04	50	GSS			16				
2N4094	N	J	2N4091	2N4091	75			40	GSS			32				
2N4095	N	J	2N4092	2N4091	20			40	GSS			32				
2N4117	N	J	MFE2093	MFE2093	0.03	0.09	0.01	40	GSS	70	210	3.0				
2N4117A	N	J	MFE2093	MFE2093	0.03	0.09	0.001	40	DGO			3.0				
2N4118	N	J	MFE2093	MFE2093	0.08	0.24	0.01	40	GSS	80	250	3.0				
2N4118A	N	J	MFE2093	MFE2093	0.08	0.24	0.001	40	DGO			3.0				
2N4119	N	J	MFE2093	MFE2093	0.2	0.6	0.01	40	GSS	100	330	3.0				
2N4119A	N	J	MFE2093	MFE2093	0.2	0.6	0.001	40	DGO			3.0				
2N4120	P	M	2N4352	2N4352		500*	0.0025	30	DSS	700		0.7				
2N4139	N	J	2N4222A	2N4221	8.0	11	1.0	50	DGO			18				
★2N4220	N	J		2N4220	0.5	3.0	0.1	30	GSS	1000	4000	6.0				
★2N4220A	N	J		2N4220	0.5	3.0	0.1	30	GSS	1000	4000	6.0	2.5		1.0H	
★2N4221	N	J		2N4220	2.0	6.0	0.1	30	GSS	2000	5000	6.0				
★2N4221A	N	J		2N4220	2.0	6.0	0.1	30	GSS	2000	5000	6.0	2.5		1.0H	
★2N4222	N	J		2N4220	5.0	15	0.1	30	GSS	2500	6000	6.0				
★2N4222A	N	J		2N4220	5.0	15	0.1	30	GSS	2500	6000	6.0	2.5		1.0H	
★2N4223	N	J		2N4223	3.0	18	0.25	30	GSS	3000	7000	6.0	5.0		200M	
★2N4224	N	J		2N4223	2.0	20	0.5	30	GSS	2000	7500	6.0				
2N4267	P	M	2N4352	2N4352		0.001	0.005	30	GSS			15				
2N4268	P	M	MFE3003	MFE3003		0.001	0.005	30	GSS			15				
2N4302	N	J	2N5457	2N5457		5.0	1.0	30	DGO			6.0				
2N4303	N	J	2N5458	2N5457		10	1.0	30	DGO			6.0				
2N4304	N	J	2N5457	2N5457		15	1.0	30	DGO			6.0				
2N4338	N	J	2N4220A	2N4220	0.2	0.6	0.1	50	DGO			6.0				
2N4339	N	J	2N4220A	2N4220	0.5	1.5	0.1	50	DGO			6.0				
2N4340	N	J	2N4220A	2N4220	1.2	3.6	0.1	50	DGO			6.0				
2N4341	N	J	2N4221A	2N4220	3.0	9.0	0.1	50	DGO			6.0				
2N4342	P	J		2N4342	4.0	12	10	25	DGO			5.0				
2N4343	P	J		2N4342	10	30	10	25	DGO			5.0				
★2N4351	N	M		2N4351		0.01	0.01	25	DSS	1000		5.5				
★2N4352	P	M		2N4352		0.005	0.01	25	DSS	1000		6.5				
2N4353	P	M	2N4352	2N4352				3.0	GSS	1000	4000	12				
★2N4360	P	J		2N4360	3.0	30	10	20	GSS	2000	8000	20	5.0		100H	
2N4382	P	J	2N3994	2N3993	10	30	1.0	25	GSS			5.0				
★2N4391	N	J		2N4391	50	100	0.1	40	GSS							
★2N4392	N	J		2N4391	25	75	0.1	40	GSS							
★2N4393	N	J		2N4391	5.0	30	0.1	40	GSS							
2N4416	N	J		2N4916	5.0	15	0.1	30	GSS	4500	7500	4.0	4.0		400M	
2N4416A	N	J	2N4416	2N4416	5.0	15	0.1	35	GSS	4500	7500	4.0	4.0		400M	
2N4417	N	J	2N4416	2N4416	5.0	15		30	GSS			3.5				
2N4445	N	J	MFE2012	MFE2010			3.0	25	GSS			50				
2N4446	N	J	MFE2012	MFE2010			3.0	25	GSS			50				
2N4447	N	J	MFE2012	MFE2010			3.0	20	GSS			50				
2N4448	N	J	MFE2012	MFE2010			3.0	20	GSS			50				
★2N4856	N	J		2N4856	50		0.25	40	GSS			18				
★2N4856A	N	J		2N4856	50		0.25	40	GSS			10				
★2N4857	N	J		2N4856	20	100	0.25	40	GSS			18				
★2N4857A	N	J		2N4856	20	100	0.25	40	GSS			10				
★2N4858	N	J		2N4856	8.0	80	0.25	40	GSS			18				
★2N4858A	N	J		2N4856	8.0	80	0.25	40	GSS			10				
★2N4859	N	J		2N4856	50		0.25	30	GSS			18				
★2N4859A	N	J		2N4856	50		0.25	30	GSS			10				
★2N4860	N	J		2N4856	20	100	0.25	30	GSS			18				
★2N4860A	N	J		2N4856	20	100	0.25	30	GSS			10				
★2N4861	N	J		2N4856	8.0	80	0.25	30	GSS			15				
★2N4861A	N	J		2N4856	8.0	80	0.25	30	GSS			10				
2N4867	N	J	2N4220A	2N4220	0.4	1.2	0.25	40	GSS	700	2000	25	1.0		1.0k	
2N4867A	N	J	2N4220A	2N4220	0.4	1.2	0.25	40	GSS	700	2000	25	1.0		1.0k	

TYPE	POLARITY	CONST.	REPLACEMENT	REFERENCE	I_{DSS} Min mA	I_{DSS} Max mA	I_{GSS} / I_{DGO}* nA	Breakdown Voltage $V_{(BR)}$ Volts	Breakdown Voltage Sub-script	y_{fs} Min μmhos	y_{fs} Max μmhos	C_{iss} pF	NF @ f dB	NF @ f $\mu V^*/\sqrt{Hz}$	NF @ f Units	NOTE
					* nA					*mmhos						
2N4868	N	J	2N4220A	2N4220	1.0	3.0	0.25	40	GSS	1000	3000	25	1.0		1.0k	
2N4868A	N	J	2N4220A	2N4220	1.0	3.0	0.25	40	GSS	1000	3000	25	1.0		1.0k	
2N4869	N	J	2N4221A	2N4220	2.5	7.5	0.25	40	GSS	1300	4000	25	1.0		1.0k	
2N4869A	N	J	2N4221A	2N4220	2.5	7.5	0.25	40	GSS	1300	4000	25	1.0		1.0k	
2N4881	N	J	2N3365	2N3365	0.4	2.0	2.0	100	GSS			15				
2N4882	N	J	2N3365	2N3365	1.5	7.5	2.0	100	GSS			15				
2N4883	N	J	2N3365	2N3365	0.4	2.0	1.0	100	GSS			15				
2N4884	N	J	2N3365	2N3365	1.5	7.5	1.0	100	GSS			15				
2N4885	N	J	2N3365	2N3365	0.4	2.0	1.0	75	GSS			15				
2N4886	N	J	2N3365	2N3365	1.5	7.5	1.0	75	GSS			15				
2N4977	N	J	MFE2009	MFE2007	50		0.5	30	GSS			35				
2N4978	N	J	MFE2008	MFE2007	15		0.5	30	GSS			35				
2N4979	N	J	MFE2007	MFE2007	7.5		0.5	30	GSS			35				
2N5018	P	J	2N3993	2N3993	10		2.0	30	GSS			45				
2N5019	P	J	2N3993	2N3993	5.0		2.0	30	GSS			45				
2N5020	P	J	2N5265	2N5265	0.3	1.2	1.0	25	GSS			25				
2N5021	P	J	2N5266	2N5265	1.0	3.5	1.0	25	GSS			25				
2N5033	P	J	2N5265	2N5265	0.3	3.5	10	20	GSS	1000	5000	25	2.0		1.0k	
2N5045	N	J			0.5	8.0	0.25					8.0				
2N5046	N	J			0.5	8.0	0.25					8.0				
2N5047	N	J			0.5	8.0	0.25					8.0				
2N5078	N	J	2N4416	2N4416	4.0	25	0.25	30	GSS	4500	10000	6.0	3.0		200M	
2N5103	N	J	2N3823	2N3823	1.0	8.0	0.1	25	GSS	2000	8000	5.0	1.5		100H	
2N5104	N	J	2N3823	2N3823	2.0	6.0	0.1	25	GSS	3500	7500	5.0	1.5		100H	
2N5105	N	J	2N3823	2N3823	5.0	15	0.1	25	GSS	5000	10000	5.0	1.5		100H	
2N5114	P	J	2N3993	2N3993	30	90	0.5	30	GSS			25				
2N5115	P	J	2N3993	2N3993	15	60	0.5	30	GSS			25				
2N5116	P	J	2N3993	2N3993	5.0	25	0.5	30	GSS			25				
2N5158	N	J	MFE2012	MFE2010			1.0	40	GSS			50				
2N5159	N	J	MFE2012	MFE2010			1.0	40	GSS			50				
2N5163	N	J	MPF102	MPF102	1.0	40	10	25	GSS	2000	9000	12				
2N5196	N	J	MMF1	MMF1	0.7	7.0	0.025	50	GSS	1000	4000	6.0	1.0		100H	
2N5197	N	J			0.7	7.0	0.025	50	GSS	1000	4000	6.0	1.0		100H	
2N5198	N	J			0.7	7.0	0.025	50	GSS	1000	4000	6.0	1.0		100H	
2N5199	N	J			0.7	7.0	0.025	50	GSS	1000	4000	6.0	1.0		100H	
2N5245	N	J	2N5486	2N5484	5.0	15	1.0	30	GSS	4500	7500	4.5	2.0		100M	
2N5246	N	J	2N5485	2N5484	1.5	7.0	1.0	30	GSS	3000	6000	4.5				
2N5247	N	J	2N5486	2N5484	8.0	24	1.0	30	GSS	4500	8000	4.5				
2N5248	N	J	MPF102	MPF102	4.0	20	5.0	30	GSS	3500	6500	6.0				
★2N5265	P	J		2N5265	0.5	1.0	2.0	60	GSS	900	2700	7.0	2.5		100H	
★2N5266	P	J		2N5265	0.8	1.6	2.0	60	GSS	1000	3000	7.0	2.5		100H	
★2N5267	P	J		2N5265	1.5	3.0	2.0	60	GSS	1500	3500	7.0	2.5		100H	
★2N5268	P	J		2N5265	2.5	5.0	2.0	60	GSS	2000	4000	7.0	2.5		100H	
★2N5269	P	J		2N5265	4.0	8.0	2.0	60	GSS	2200	4500	7.0	2.5		100H	
★2N5270	P	J		2N5265	7.0	14.0	2.0	60	GSS	2500	5000	7.0	2.5		100H	
2N5277	N	J	2N3822	2N3821	2.5	12.5	5.0	150	GSS	2000	5000	25	3.0		1.0k	
2N5278	N	J	2N5364	2N5358	10	25	5.0	150	GSS	3000	6000	25	3.0		1.0k	
★2N5358	N	J		2N5358	0.5	1.0	0.1	40	GSS	1000	3000	6.0	2.5		100H	
★2N5359	N	J		2N5358	0.8	1.6	0.1	40	GSS	1200	3600	6.0	2.5		100H	
★2N5360	N	J		2N5358	1.5	3.0	0.1	40	GSS	1400	4200	6.0	2.5		100H	
★2N5361	N	J		2N5358	2.5	5.0	0.1	40	GSS	1500	4500	6.0	2.5		100H	
★2N5362	N	J		2N5358	4.0	8.0	0.1	40	GSS	2000	5500	6.0	2.5		100H	
★2N5363	N	J		2N5358	7.0	14	0.1	40	GSS	2500	6000	6.0	2.5		100H	
★2N5364	N	J		2N5358	9.0	18	0.1	40	GSS	2700	6500	6.0	2.5		100H	
2N5391	N	J	2N5358	2N5358	0.5	1.5	0.2	70	GSS	1500	4500	18	1.0		100H	
2N5392	N	J	2N5360	2N5358	1.0	3.0	0.2	70	GSS	2000	6000	18	1.0		100H	
2N5393	N	J	2N5360	2N5358	2.5	4.5	0.2	70	GSS	3000	6500	18	1.0		100H	
2N5394	N	J	2N5361	2N5358	4.0	6.0	0.2	70	GSS	4000	7000	18	1.0		100H	
2N5395	N	J	2N5362	2N5358	5.5	8.0	0.2	70	GSS	4500	7000	18	1.0		100H	
2N5396	N	J	2N5362	2N5358	7.5	10	0.2	70	GSS	4500	7500	18	1.0		100H	
2N5397	N	J	MFE2001	MFE2000	10	30	0.1	25	GSS	6000	10000	5.0	3.5		450M	
2N5398	N	J	MFE2001	MFE2000	5.0	40	0.1	25	GSS	5500	10000	5.5				
2N5432	N	J	MFE2012	MFE2012	150		0.2	25	GSS			30				
2N5433	N	J	MFE2012	MFE2012	100		0.2	25	GSS			30				
2N5434	N	J	MFE2012	MFE2012	30		0.2	25	GSS			30				
2N5452	N	J			0.5	5.0	0.1	50	GSS	1000	3000	4.0	.02*		1.0k	
2N5453	N	J			0.5	5.0	0.1	50	GSS	1000	3000	4.0	.02*		1.0k	
2N5454	N	J			0.5	5.0	0.1	50	GSS	1000	3000	4.0	.02*		1.0k	
★2N5457	N	J		2N5457	1.0	5.0	1.0	25	GSS	1000	5000	7.0				
★2N5458	N	J		2N5457	2.0	8.0	1.0	25	GSS	1500	5500	7.0				

TYPE	POLARITY	CONST.	REPLACEMENT	REFERENCE	I_{DSS} Min mA	I_{DSS} Max mA	I_{GSS} I_{DGO}* nA	Breakdown Voltage $V_{(BR)}$ Volts	Breakdown Voltage Sub-script	y_{fs} Min μmhos	y_{fs} Max μmhos	C_{ISS} pF	NF @ f dB	NF @ f $\mu V^*/\sqrt{Hz}$	NF @ f Units	NOTE
					* nA					* mmhos						
★2N5459	N	J		2N5457	4.0	16	1.0	25	GSS	2000	6000	7.0				
★2N5460	P	J		2N5460	1.0	5.0	5.0	40	GSS	1000	4000	7.0	2.5		100H	
★2N5461	P	J		2N5460	2.0	9.0	5.0	40	GSS	1500	5000	7.0	2.5		100H	
★2N5462	P	J		2N5460	4.0	16	5.0	40	GSS	2000	6000	7.0	2.5		100H	
★2N5463	P	J		2N5460	1.0	5.0	5.0	60	GSS	1000	4000	7.0	2.5		100H	
★2N5464	P	J		2N5460	2.0	9.0	5.0	60	GSS	1500	5000	7.0	2.5		100H	
★2N5465	P	J		2N5460	4.0	16	5.0	60	GSS	2000	6000	7.0	2.5		100H	
★2N5471	P	J		2N5471	0.02	0.06	0.5	40	GSS	60	180	5.0	2.5		1.0k	
★2N5472	P	J		2N5471	0.05	0.12	0.5	40	GSS	90	225	5.0	2.5		1.0k	
★2N5473	P	J		2N5471	0.10	0.25	0.5	40	GSS	120	300	5.0	2.5		1.0k	
★2N5474	P	J		2N5471	0.20	0.50	0.5	40	GSS	160	400	5.0	2.5		1.0k	
★2N5475	P	J		2N5471	0.40	1.0	0.5	40	GSS	200	500	5.0	2.5		1.0k	
★2N5476	P	J		2N5471	0.80	2.0	0.5	40	GSS	260	650	5.0	2.5		1.0k	
★2N5484	N	J		2N5484	1.0	5.0	1.0	25	GSS	3000	6000	5.0	3.0		100M	
★2N5485	N	J		2N5484	4.0	10	1.0	25	GSS	3500	7000	5.0	2.0		100M	
★2N5486	N	J		2N5484	8.0	20	1.0	25	GSS	4000	8000	5.0	2.0		100M	
2N5505	P	J					0.25	30	GSS	1000	3500	16	2.0		1.0k	Dual
2N5506	P	J					0.25	30	GSS	1000	3500	16	2.0		1.0k	Dual
2N5507	P	J					0.25	30	GSS	1000	3500	16	2.0		1.0k	Dual
2N5508	P	J					0.25	30	GSS	1000	3500	16	2.0		1.0k	Dual
2N5509	P	J					0.25	30	GSS	1000	3500	16	2.0		1.0k	Dual
2N5510	P	J					0.25	30	GSS	500	3000	16	2.0		1.0k	Dual
2N5511	P	J					0.25	30	GSS	500	3000	16	2.0		1.0k	Dual
2N5512	P	J					0.25	30	GSS	500	3000	16	2.0		1.0k	Dual
2N5513	P	J					0.25	30	GSS	500	3000	16	2.0		1.0k	Dual
2N5514	P	J					0.25	30	GSS	500	3000	16	2.0		1.0k	Dual
2N5515	N	J			0.5	7.5	0.25	40	GSS	1000	4000	25	2.0		1.0H	Dual
2N5516	N	J			0.5	7.5	0.25	40	GSS	1000	4000	25	2.0		1.0H	Dual
2N5517	N	J			0.5	7.5	0.25	40	GSS	1000	4000	25	2.0		1.0H	Dual
2N5518	N	J			0.5	7.5	0.25	40	GSS	1000	4000	25	2.0		1.0H	Dual
2N5519	N	J			0.5	7.5	0.25	40	GSS	1000	4000	25	2.0		1.0H	Dual
2N5520	N	J			0.5	7.5	0.25	40	GSS	1000	4000	25	1.0		1.0H	Dual
2N5521	N	J			0.5	7.5	0.25	40	GSS	1000	4000	25	1.0		1.0H	Dual
2N5522	N	J			0.5	7.5	0.25	40	GSS	1000	4000	25	1.0		1.0H	Dual
2N5523	N	J			0.5	7.5	0.25	40	GSS	1000	4000	25	1.0		1.0H	Dual
2N5524	N	J			0.5	7.5	0.25	40	GSS	1000	4000	25	1.0		1.0H	Dual
2N5543	N	J	2N3822	2N3819	2.0	10	1000			750	3000	10				
2N5544	N	J	2N3822	2N3819	2.0	10	1000			750	3000	10				
2N5545	N	J	MMF1	MMF1	0.5	8.0	0.1			1500	6000	6.0	3.5		10H	Dual
2N5546	N	J	MMF1	MMF1	0.5	8.0	0.1			1500	6000	6.0	5.0		10H	Dual
2N5547	N	J	MMF1	MMF1	0.5	8.0	0.1			1500	6000	6.0				Dual
2N5548	P	M	MFE3001	MFE3001		10*	0.05			3500	6500	10				
2N5549	N	J	2N4093	2N4088	10	60	0.25	40	GSS	6000	15000	8.0				
★2N5555	N	J		2N5555	15		1.0	25	GSS			5.0				
★2N5556	N	J		2N5556	0.5	2.5	0.1	30	GSS	1500	6500	6.0	1.0		10H	
★2N5557	N	J		2N5556	2.0	5.0	0.1	30	GSS	1500	6500	6.0	1.0		10H	
★2N5558	N	J		2N5556	4.0	10	0.1	30	GSS	1500	6500	6.0	1.0		10H	
2N5561	N	J			1.0	10	0.1	50	GSS			7.0	1.0		10H	MP
2N5562	N	J			1.0	10	0.1	50	GSS			7.0	1.0		10H	MP
2N5563	N	J			1.0	10	0.1	50	GSS			7.0	1.0		10H	MP
2N5564	N	J			5.0	30	0.1	40	GSS			12	1.0		10H	MP
2N5565	N	J			5.0	30	0.1	40	GSS			12	1.0		10H	MP
2N5566	N	J			5.0	30	0.1	40	GSS			12	1.0		10H	MP
2N5592	N	J			1.0	10	0.25	50	GSS			20	2.6		10H	
2N5593	N	J			1.0	10	0.25	50	GSS			20	6.0		10H	
2N5594	N	J			1.0	10	0.25	50	GSS			20	10		10H	
2N5638	N	J				50	1.0	30	GSS				10			
2N5639	N	J				25	1.0	30	GSS				10			
2N5640	N	J				5.0	1.0	30	GSS				10			
2N5647	N	J	2N5556	2N5555	0.3	0.6	0.01	50	GSS			3.0	1.0		1.0k	
2N5648	N	J	2N5556	2N5555	0.5	1.0	0.01	50	GSS			3.0	1.0		1.0k	
2N5649	N	J	2N5556	2N5555	0.8	1.6	0.01	50	GSS			3.0	1.0		1.0k	
2N5653	N	J	2N5556	2N5555	40		1.0	30	GSS			10	2.5			
2N5654	N	J			15		1.0	30	GSS			10	2.5			
★2N5668	N	J		2N5668	1.0	5.0	2.0	25	GSS			7.0	2.5		100M	
★2N5669	N	J		2N5668	4.0	10	2.0	25	GSS			7.0	2.5		100M	
★2N5670	N	J		2N5668	8.0	20	2.0	25	GSS			7.0	2.5		100M	
★2N5797	P	J		2N5797	0.02	0.10	3.0	40	GSS	60*	225*	5.0				MP
★2N5798	P	J		2N5797	0.08	0.40	3.0	40	GSS	100*	440*	5.0				MP
★2N5799	P	J		2N5797	0.25	1.00	3.0	40	GSS	160*	500*	5.0				MP

TYPE	POLARITY	CONST.	REPLACEMENT	REFERENCE	I_{DSS} Min mA	I_{DSS} Max mA	I_{GSS} I_{DGO}* nA	Breakdown Voltage $V_{(BR)}$ Volts	Breakdown Voltage Sub-script	y_{fs} Min μmhos	y_{fs} Max μmhos	C_{ISS} pF	NF @ f dB	NF @ f μV* / √Hz	NF @ f Units	NOTE
					*nA					*mmhos						
★2N5800	P	J		2N5797	0.70	2.00	3.0	40	GSS	250*	700*	5.0				MP
2N5801	N	J			2.0	15	0.1	-40	GSS			15	1.0		100H	MP
2N5802	N	J			10	40	0.1	-40	GSS			15	1.0		100H	MP
2N5803	N	J			30	80	0.1	-40	GSS			15	1.0		100H	MP
2N5902	N	J			0.03	0.5	0.005	-40	GSS	70	250	3.0	3.0		100H	MP
2N5903	N	J			0.03	0.5	0.005	-40	GSS	70	250	3.0	3.0		100H	MP
2N5904	N	J			0.03	0.5	0.005	-40	GSS	70	250	3.0	3.0		100H	MP
2N5905	N	J			0.03	0.5	0.005	-40	GSS	70	250	3.0	3.0		100H	MP
2N5906	N	J			0.03	0.5	0.002	-40	GSS	70	250	3.0	1.0		100H	MP
2N5907	N	J			0.03	0.5	0.002	-40	GSS	70	250	3.0	1.0		100H	MP
2N5908	N	J			0.03	0.5	0.002	-40	GSS	70	250	3.0	1.0		100H	MP
2N5909	N	J			0.03	0.5	0.002	-40	GSS	70	250	3.0	1.0		100H	
2N5949	N	M	2N5638	2N5638	12	18	-1.0	30	GSS	3.0	7.5	6.0	2.0		1.0k	
2N5950	N	M	2N5639	2N5638	10	15	-1.0	30	GSS	3.0	7.5	6.0	2.0		1.0k	
2N5951	N	M	2N5640	2N5638	7.0	13	-1.0	30	GSS	3.0	6.5	6.0	2.0		1.0k	
2N5952	N	M	2N5640	2N5638	4.0	8.0	-1.0	30	GSS	1.0	6.5	6.0	2.0		1.0k	
2N5953	N	M	2N5640	2N5638	2.5	5.0	-1.0	30	GSS	1.0	6.5	6.0	2.0		1.0k	
2N6449	S	N			2.0	10	10	300	GSS	0.5*	3.0*	10				
2N6450	S	N			2.0	10	10	200	GSS	0.5*	3.0*	10				
2N6451	S	N			5.0	20	0.1	20	GSS	15*	30*	25	1.5		10H	
2N6452	S	N			5.0	20	0.5	25	GSS	15*	30*	25	2.5		10H	
2N6453	S	N			15	50	0.1	20	GSS	20*	40*	25	1.5		10H	
2N6454	S	N			15	50	0.5	25	GSS	20*	40*	25	2.5		10H	
2N6483	N	J			0.5	7.5	0.2	50	GSS	1000	4000	20	.25		10 H	MP
2N6484	N	J			0.5	7.5	0.2	50	GSS	1000	4000	20	.25		10 H	MP
2N6485	N	J			0.5	7.5	0.2	50	GSS	1000	4000	20	.25		10 H	MP
3N89	P	J			0.5	2.5	5.0	30		450	1300	3.0				
3N96	P	J			0.5	2.5	5.0	30		450	1300	4.0				Dual
3N97	P	J			0.5	2.5	5.0	30		450	1300	4.0				Dual
3N98	N	M	MFE3004	MFE3004	3.5	7.7	0.05	32		1000	3000	7.0				
3N99	N	M	MFE3004	MFE3004	5.0	10.5	0.05	32		1000	4500	7.0				
★3N124	N	J		3N124	0.2	2.0	0.25	50	GSS	500	2000	14	4.0		1.0k	
★3N125	N	J		3N124	1.5	4.5	0.25	50	GSS	800	2400	14	4.0		1.0k	
★3N126	N	J		3N124	3.0	9.0	0.25	50	GSS	1200	3600	14	4.0		1.0k	
★3N128	N	M			5.0	25	5.0			5000	12000	7.0	5.0		200M	
3N138	N	M	MFE3004	MFE3004			0.010	45	GD			5.0				
3N139	N	M	MFE3004	MFE3004	5.0	25	1.0	45	GD	3000	7500	7.0				
★3N140	N	M		3N140	5.0	30	1.0	20	DS			7.0	4.5		200M	
3N141	N	M	MFE3006	MFE3006	5.0	30	1.0	20	DS			7.0				
3N142	N	M	MFE3004	MFE3004	5.0	50	5.0	20	DS			10				
3N143	N	M	MFE3004	MFE3004	10	50	1.0					7.0				
3N145	P	M	2N4352	2N4352				30	DB							
3N146	P	M	3N157A	3N157				30	DB							
3N147	P	M						30	DB							
3N148	P	M						30	DB							
3N149	P	M	3N157A	3N157				30	DB							
3N150	P	M	3N157A	3N157				30	DB							
3N151	P	M			-5.0*							12	10		100H	
3N152	N	M	MFE3004	MFE3004	5.0	30	1.0						3.5		200M	
3N153	N	M	MFE3004	MFE3004			0.05					8.0				
3N154	N	M	MFE3004	MFE3004	10	25	0.05						5.0		200M	
★3N155	P	M		3N155		1.0	1.0	35	DSS	1000	4000	5.0				
★3N155A	P	M		3N155		0.25	1.0	35	DSS	1000	4000	5.0				
★3N156	P	M		3N155		1.0	1.0	35	DSS	1000	4000	5.0				
★3N156A	P	M		3N155		0.25	1.0	35	DSS	1000	4000	5.0				
★3N157	P	M		3N157		1.0	0.010	35	DSS	1000	4000	5.0				
★3N157A	P	M		3N157		0.25	0.010	50	DSS	1000	4000	5.0				
★3N158	P	M		3N157		1.0	0.010	35	DSS	1000	4000	5.0				
★3N158A	P	M		3N157		0.25	0.010	50	DSS	1000	4000	5.0				
3N159	N	M	MFE3007	MFE3007	5.0	30	1.0			7000	18000	7.0	3.5		200M	
3N160	P		MFE3003	MFE3001		10*	0.01			3500	6500	10				
3N161	P		MFE3003	MFE3001		10*				3500	6500	10				
3N162	P	M	MFE3003	MFE3001		150*						20				
3N163	P	M	MFE3003	MFE3001		0.2*	0.01					2.5				
3N164	P	M				0.4*	0.01					2.5				
3N165	P	M				0.2*	0.01					3.0				

TYPE	POLARITY	CONST.	REPLACEMENT	REFERENCE	I_{DSS} Min mA	I_{DSS} Max mA	I_{GSS}, I_{DGO}* nA	Breakdown Voltage $V_{(BR)}$ Volts	Breakdown Voltage Sub-script	y_{fs} Min μmhos	y_{fs} Max μmhos	C_{ISS} pF	NF @ f dB	NF @ f μV* / √Hz	NF @ f Units	NOTE
					* nA					*mmhos						
3N166	P	M				0.2*	0.01					3.0				
3N167	P	M				-0.5*						35				
3N168	P	M				-1.0*						35				
★3N169	N	M		3N169		10*						5.0				
★3N170	N	M		3N169		10*						5.0				
★3N171	N	M		3N169		10*						5.0				
3N172	P	M				0.4*						3.5				
3N173	P	M				10*						3.5				
3N174	P	M	2N4352	2N4352		5.0*	.0025					4.0				
3N175	N	M				5.0*	0.2					5.0				
3N176	N	M				10*	0.2					5.0				
3N177	N	M				25*	0.2					7.0				
3N178	P	M				0.5*	0.2					3.5				
3N179	P	M				1.0*						4.5				
3N180	P	M				1.0*						5.0				
3N181	P	M				0.5*						25				
3N182	P	M				2.5*						25				
3N183	P	M				10*						30				
3N184	P	M				2.0*						9.0				
3N185	P	M				5.0*						10				
3N186	P	M				10*						11				
3N188	P	M				0.2*						4.5				
3N189	P	M				0.2*						4.5				
3N190	P	M				0.2*	0.01					4.5				
3N191	P	M				0.2*	0.01					4.5				
3N192	N	M			3.0	30	-1.0	-6.0	GSSR	8000	24000	6.0				
3N193	N	M			1.0	20	-1.0	-6.0	GSSR	6000	22000	7.0				
3N200	N	J			0.5	12	-50	6.5	GSS							Dual
3N201	N	J			6.0	30	-10	6.0	GSS	8.0	20		4.5	200M		Dual
3N202	N	J			6.0	30	-10	6.0	GSS	8.0	20		4.5	200M		Dual
3N203	N	J			3.0	15	-10	6.0	GSS	7.0	15		6.0	45M		Dual
3N203A	N	M			3.0	15	10	20	DS	7000	15000	-	4.0	200M		TETR
3N204	N	S			6.0	30	10	30	GSS	10*	22*		3.5			Dual
3N205	N	S			6.0	30	10	30	GSS	10*	22*					Dual
3N206	N	S			3.0	15	10	30	GSS	7	17*		4.0			Dual
3N207	P	S				10*	200					4.0				Dual
3N208	P	S				10*	1.0	30	GSSF			4.0				Dual
★3N209	N	M		3N209	5.0	30	20	25	DS	10000	20000	7.0	6.0	500		TETR
★3N210	N	M		3N209	5.0	30	20	25	DS	10000	20000	7.0	6.0	500		TETR
3N211	N	S			6.0	40	10	-6.0	GSS	17*	40*		3.5	45M		Dual
3N212	N	S			6.0	40	10	-6.0	GSS	17*	40*		3.5	45M		Dual
3N213	N	S			6.0	40	10	-6.0	GSS	17*	40*		3.5	45M		Dual
3N214	S	N					10	7.0	GSS			6.0				
3N215	S	N					10	7.0	GSS			6.0				
3N216	S	N					10	7.0	GSS			6.0				
3N217	S	N					10	7.0	GSS			6.0				
3N218	P					20*						50				
3N225	N	M			1.0	20	10	20	DS	6000	15000	-	7.0	900M		TETR
3N225A	N	M			1.0	15	10	20	DSX	7500	15000	-	5.5	900M		TETR
MFE120	N	M			2.0	18	20	25	DSX	8000	18000	7.0	5.0	150M		
MFE121	N	M			5.0	30	20	25	DSX	10000	20000	6.0	5.0	60M		
MFE122	N	M			2.0	20	20	25	DSX	8000	18000	7.0	5.0	200M		
MFE130	N	M			3.0	30	20	25	DSX	8000	20000	7.0	5.0	105M		Dual
MFE131	N	M			3.0	30	20	25	DSX	8000	20000	7.0	5.0	60M		Dual
MFE132	N	M			3.0	30	20	25	DSX	8000	20000	7.0	5.0	200M		Dual
★MFE590	N	M				1000*	50	25	DSS	10000	20000	3.0	6.0	900M		TETR
★MFE591	N	M				1000*	50	25	DSS	8000	20000	3.5	8.0	900M		TETR
★MFE823	P	M				20*	0.001	25	DSS	1000	-	6.0	-	-		
★MFE824	N	M			1.0	15	0.001	20	DSX	1000	4000	4.0	-	-		
MFE2000	N	J			4.0	10	-200	-25	GSS	2500	6000	5.0	2.0	100M		
MFE2001	N	J			8.0	20	-200	-25	GSS	4000	8000	5.0	2.0	100M		
MFE2004	N	J			8.0		0.2	30	GSS			16				
MFE2005	N	J			15		0.2	30	GSS			16				
MFE2006	N	J			30		0.2	30	GSS			16				
MFE2007	N	J			8.0		2.0	25	GSS			30				
MFE2008	N	J			20		2.0	25	GSS			30				
MFE2009	N	J			50		2.0	25	GSS			30				
MFE2010	N	J			15		3.0	25	GSS			50				
MFE2011	N	J			40		3.0	25	GSS			50				

TYPE	POLARITY	CONST.	REPLACEMENT	REFERENCE	I_{DSS} Min mA	I_{DSS} Max mA	I_{GSS} / I_{DGO}* nA	Breakdown Voltage $V_{(BR)}$ Volts	Breakdown Voltage Sub-script	y_{fs} Min μmhos	y_{fs} Max μmhos	C_{ISS} pF	NF @ f dB μV* / √Hz	NF @ f Units	NOTE
					* nA					* mmhos					
MFE2012	N	J			100		3.0	25	GSS			50			
MFE2093	N	J			0.1	0.7	-0.1	-50	GSS	250	500	6.0			
MFE2094	N	J			0.4	1.4	-0.1	-50	GSS	350	700	6.0			
MFE2095	N	J			1.0	3.0	-0.1	-50	GSS	400	800	6.0			
MFE3001	N	J			0.5	6.0	0.01	20	DSX	700	3500	5.0			
MFE3002	N	M				10*	0.1	15	DSS			5.0			
MFE3003	P	M				-10*	0.1	-15	DSS						
MFE3004	N	M			2.0	10	0.05	20	DSX	2000		4.5	4.5	200M	
MFE3005	N	M			2.0	10	0.05	20	DSX	2000		4.5	4.5	400M	
MFE3006	N	M			2.0	18	10	25	DSX	8000	18000	6.0	4.0	100M	
MFE3007	N	M			5.0	20	10	25	DSX	10000	18000	5.5	4.0	200M	
MFE3008	N	M			2.0	20	10	25	DSX	8000	18000	6.0			
MFE3020	P	M				10*	0.01	-25	DSS	500		7.0			
MFE3021	P	M				10*	0.01	-25	DSS	500		7.0			
MFE4007	P	J			0.5	1.0	2.0	40	GSS	900	2700	7.0	2.5	100H	
MFE4008	P	J			0.8	1.6	2.0	40	GSS	1000	3000	7.0	2.5	100H	
MFE4009	P	J			1.5	3.0	2.0	40	GSS	1500	3500	7.0	2.5	100H	
MFE4010	P	J			2.5	5.0	2.0	40	GSS	2000	4000	7.0	2.5	100H	
MFE4011	P	J			4.0	8.0	2.0	40	GSS	2200	4500	7.0	2.5	100H	
MFE4012	P	J			7.0	14	2.0	40	GSS	2500	5000	7.0	2.5	100H	
MFE5000	P	M			1.0*	10*	1.0	25	DSS	2000	8000	6.0			Quad
MMF1	N	J			0.5	10	0.05	30	GSS	1500	6500	6.0	2.5	100H	
MMF2	N	J			0.5	10	0.05	30	GSS	1500	6500	6.0	2.5	100H	
MMF3	N	J			0.5	10	0.05	30	GSS	1500	6500	6.0	2.5	100H	
MMF4	N	J			0.5	10	0.05	30	GSS	1500	6500	6.0	2.5	100H	
MMF5	N	J			0.5	10	0.05	30	GSS	1500	6500	6.0	2.5	100H	
MMF6	N	J			0.5	10	0.05	30	GSS	1500	6500	6.0	2.5	100H	
MMT3823	N	J			5.0	20	-1.0	-30	GSS	3000	8000	4.0	2.0	100M	
MPF102	N	J			2.0	20	-2.0	-25	GSS	2000	7500	7.0			
MPF108	N	J			1.5	24	1.0	-25	GSS	2000	7500	6.5	2.5	1.0k	
MPF109	N	J			0.5	24	-1.0	-25	GSS	800	1600	7.0	2.5	1.0k	
MPF111	N	J			0.5	20	100	-20	GSS	500		4.5*			
MPF112	N	J			1.0	25	100	-25	GSS	1000	7500	8.0*			
MPF120	N	M			2.0	7.0	20	25	DSX	8000	18000	7.0	5.0	105M	Dual
MPF121	N	M			5.0	10	20	25	DSX	10000	20000	6.0	5.0	60M	Dual
MPF122	N	M			2.0	9.0	20	25	DSX	8000	18000	7.0	5.0	200M	Dual
MPF130	N	M			3.0	30	20	25	DSX	8000	20000	7.0	5.0	105M	Dual
MPF131	N	M			3.0	30	20	25	DSX	8000	20000	7.0	5.0	60M	Dual
MPF132	N	M			3.0	30	20	25	DSX	8000	20000	7.0	5.0	200M	Dual
MPF161	P	J			0.5	14	10	40	GSS	800	6000	7.0	2.5	1.0k	
MPF256	N	J			3.0(1)	7.0(1)	5.0	25	GSS	6.0*		3.0	2.0		
MPF820	S	J			10		5.0	25	GSS	20*typ	15*	4.0			
MPF970	S	J			15	60	1.0	30	GSS			12			
MPF971	S	J			2.0	30	1.0	30	GSS			12			
MPF4391	N	J			60	130	1.0	30	GSS			10			
MPF4392	N	J			25	75	1.0	30	GSS			10			
MPF4393	N	J			5.0	30	1.0	30	GSS			10			

TABLE 10 - OPTOELECTRONIC DETECTORS AND COUPLERS

Specifications describing the photo detectors and optically coupled pairs.

TABLE 10 - OPTOELECTRONIC DETECTORS AND COUPLERS

Hybrid Circuits

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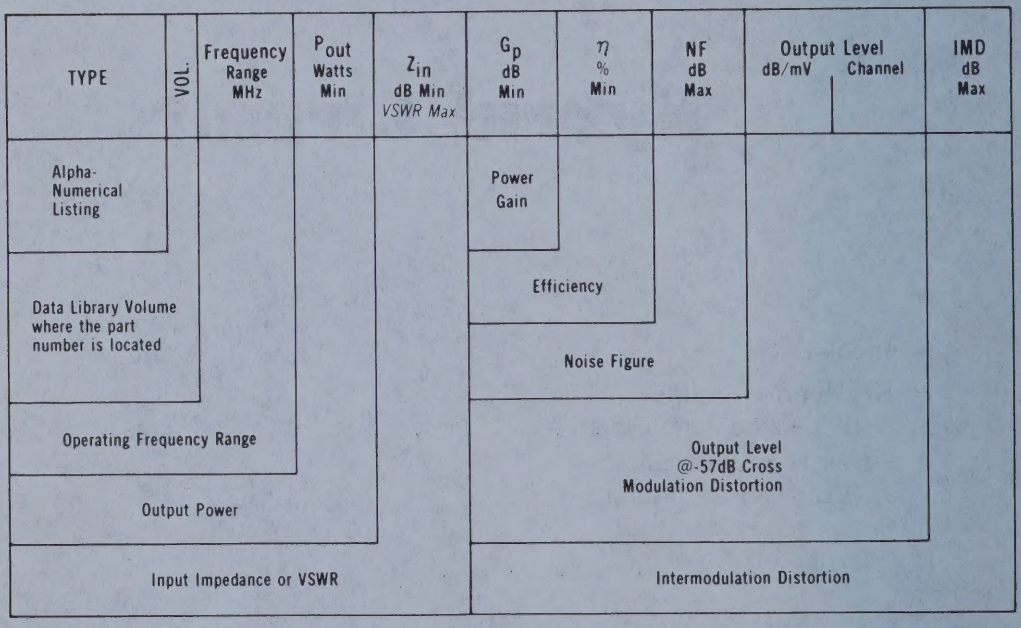
Index	Table No.	Page No.
RF Hybrid Circuits (Wideband Amplifiers)	11	4-2
Power Hybrid Circuits (Voltage Regulators)	12	4-3

TABLE 11 - RF HYBRID CIRCUITS

The following table contains an alphanumerical listing and short-form specifications for Motorola non-registered wideband amplifiers and UHF power modules.



TYPE	VOL.	Frequency Range MHz	Pout Watts Min	Zin dB Min VSWR Max	Gp dB Min	η % Min	NF dB Max	Output Level dB/mV	Output Level Channel	IMD dB Max
MHW401	3	400-470	1.5	2:1	15	40	-	-	-	-
MHW559	3	40-300	-	18	15.5	-	8.5	-54	21	-64
MHW560	3	40-300	-	16	15.5	-	8.5	-51	21	-60
MHW561	3	40-300	-	16	15.5	-	12	-54	21	-66
MHW562	3	40-300	-	18	15.5	-	10	-57	21	-69
MHW601		146-174	13	2.0:1	21	40	-	-	-	-
MHW602		146-174	20	2.0:1	20.6	40	-	-	-	-
MHW709	3	400-470	7.5	2:1	18.8	35	-	-	-	-
MHW710	3	400-470	13	2:1	19.4	35	-	-	-	-

TABLE 12 - POWER HYBRID CIRCUITS
(Voltage Regulators)

The following table contains an alphanumerical listing and short-form specifications for Motorola non-registered silicon power voltage regulators.

TYPE	VOL.	V_O Volts		$\lvert V_{in}-V_O \rvert$ Volts		V_{in} Volts		I_{IB} mA	Reg_{in} $\%V_O/V_{in}$	Reg_L $\%V_O$	P_D Watts
		Min	Max	Min	Max	Min	Max	Max	Max	Max	Max
Alpha-numerical Listing											Internal Power Dissipation
First type number on data sheet where the part number is located										Load Regulation	
Output Voltage Range									Line Regulation		
Input-Output Voltage Differential											
Input Voltage Range								Standby Current Drain			

TYPE	VOL.	V_O Volts		$\lvert V_{in}-V_O \rvert$ Volts		V_{in} Volts		I_{IB} mA	Reg_{in} $\%V_O/V_{in}$	Reg_L $\%V_O$	P_D Watts
		Min	Max	Min	Max	Min	Max	Max	Max	Max	Max
MPC900	-	4.0	30	2.5	30	9.0	35	-	0.1	0.1	100
MPC1000	3	2.0	35	3.0	60	9.5	40	50	0.5	0.6	100

Integrated Circuits

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This section includes an alphanumerical index and description of the following integrated circuit lines:

Index

LINEAR
LSI
McMOS
MDTL
MECL
MEMORIES
MHTL
MOS
MRTL
MTTL
PLL

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC400	MTTL	CF	Dual 4-Input NAND Gate
MC401	MTTL	CF	Expandable 4-Wide 2-2-2-3-Input AND-OR-INVERT Gate
MC402	MTTL	CF	8-Input NAND Gate
MC403	MTTL	CF	2-Wide 3-Input AND-OR-INVERT Gate with Gated Complement
MC404	MTTL	CF	Expandable 3-Wide 3-Input AND-OR-INVERT Gate
MC405	MTTL	CF	Expandable 2-Wide 4-Input AND-OR-INVERT Gate
MC406	MTTL	CF	Expandable 8-Input NAND Gate
MC407	MTTL	CF	Line Driver
MC408	MTTL	CF	Quad 2-Input NAND Gate
MC409	MTTL	CF	4-Wide 3-2-2-3 Input Expander for AND-OR-INVERT Gates
MC410	MTTL	CF	Dual 4-Input Expander for AND-OR-INVERT Gates
MC411	MTTL	CF	Dual 4-Input Expander for NAND Gates
MC412	MTTL	CF	Triple 3-Input NAND Gate
MC413	MTTL	CF	R-S Flip-Flop
MC414	MTTL	CF	Gated R-S Flip-Flop
MC415	MTTL	CF	AND J-K Flip-Flop
MC416	MTTL	CF	OR J-K Flip-Flop
MC419	MTTL	CF	Triple 2-Input Bus Driver
MC420	MTTL	CF	Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate
MC421	MTTL	CF	AC Coupled R-S Flip-Flop
MC422	MTTL	CF	Dual Type D Flip-Flop
MC423	MTTL	CF	Dual J-K Flip-Flop (separate clock)
MC424	MTTL	CF	Dual J-K Flip-Flop (common clock)
MC426	MTTL	CF	Dual 3-Input Pulse Shaper/Delay AND Gate
MC427	MTTL	CF	OR Expandable Dual 4-Input AND Gate
MC428	MTTL	CF	Dual 2-Wide 2-3 Input OR Expander
MC429	MTTL	CF	Hex Inverter
MC450	MTTL	CF	Dual 4-Input NAND Gate
MC451	MTTL	CF	Expandable 4-Wide 2-2-2-3-Input AND-OR-INVERT Gate
MC452	MTTL	CF	8-Input NAND Gate
MC453	MTTL	CF	2-Wide 3-Input AND-OR-INVERT Gate with Gated Complement
MC454	MTTL	CF	Expandable 3-Wide 3-Input AND-OR-INVERT Gate
MC455	MTTL	CF	Expandable 2-Wide 4-Input AND-OR-INVERT Gate
MC456	MTTL	CF	Expandable 8-Input NAND Gate
MC457	MTTL	CF	Line Driver
MC458	MTTL	CF	Quad 2-Input NAND Gate
MC459	MTTL	CF	4-Wide 3-2-2-3 Input Expander for AND-OR-INVERT Gates
MC460	MTTL	CF	Dual 4-Input Expander for AND-OR-INVERT Gates
MC461	MTTL	CF	Dual 4-Input Expander for NAND Gates
MC462	MTTL	CF	Triple 3-Input NAND Gate
MC463	MTTL	CF	R-S Flip-Flop
MC464	MTTL	CF	Gated R-S Flip-Flop
MC465	MTTL	CF	AND J-K Flip-Flop
MC466	MTTL	CF	OR J-K Flip-Flop
MC469	MTTL	CF	Triple 2-Input Bus Driver
MC470	MTTL	CF	Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate
MC471	MTTL	CF	AC Coupled R-S Flip-Flop
MC472	MTTL	CF	Dual Type D Flip-Flop
MC473	MTTL	CF	Dual J-K Flip-Flop (separate clock)
MC474	MTTL	CF	Dual J-K Flip-Flop (common clock)
MC476	MTTL	CF	Dual 3-Input Pulse Shaper/Delay AND Gate
MC477	MTTL	CF	OR Expandable Dual 4-Input AND Gate
MC478	MTTL	CF	Dual 2-Wide 2-3 Input OR Expander
MC479	MTTL	CF	Hex Inverter
MC500	MTTL	CF	Dual 4-Input NAND Gate
MC501	MTTL	CF	Expandable 4-Wide 2-2-2-3-Input AND-OR-INVERT Gate
MC502	MTTL	CF	8-Input NAND Gate
MC503	MTTL	CF	2-Wide 3-Input AND-OR-INVERT Gate with Gated Complement
MC504	MTTL	CF	Expandable 3-Wide 3-Input AND-OR-INVERT Gate
MC505	MTTL	CF	Expandable 2-Wide 4-Input AND-OR-INVERT Gate
MC506	MTTL	CF	Expandable 8-Input NAND Gate
MC507	MTTL	CF	Line Driver
MC508	MTTL	CF	Quad 2-Input NAND Gate
MC509	MTTL	CF	4-Wide 3-2-2-3 Input Expander for AND-OR-INVERT Gates
MC510	MTTL	CF	Dual 4-Input Expander for AND-OR-INVERT Gates
MC511	MTTL	CF	Dual 4-Input Expander for NAND Gates
MC512	MTTL	CF	Triple 3-Input NAND Gate
MC513	MTTL	CF	R-S Flip-Flop
MC514	MTTL	CF	Gated R-S Flip-Flop
MC515	MTTL	CF	AND J-K Flip-Flop

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC516	MTTL	CF	OR J-K Flip-Flop
MC519	MTTL	CF	Triple 2-Input Bus Driver
MC520	MTTL	CF	Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate
MC521	MTTL	CF	AC Coupled R-S Flip-Flop
MC522	MTTL	CF	Dual Type D Flip-Flop
MC523	MTTL	CF	Dual J-K Flip-Flop (separate clock)
MC524	MTTL	CF	Dual J-K Flip-Flop (common clock)
MC526	MTTL	CF	Dual 3-Input Pulse Shaper/Delay AND Gate
MC527	MTTL	CF	OR Expandable Dual 4-Input AND Gate
MC528	MTTL	CF	Dual 2-Wide 2-3 Input OR Expander
MC529	MTTL	CF	Hex Inverter
MC550	MTTL	CF	Dual 4-Input NAND Gate
MC551	MTTL	CF	Expandable 4-Wide 2-2-2-3-Input AND-OR-INVERT Gate
MC552	MTTL	CF	8-Input NAND Gate
MC553	MTTL	CF	2-Wide 3-Input AND-OR-INVERT Gate with Gated Complement
MC554	MTTL	CF	Expandable 3-Wide 3-Input AND-OR-INVERT Gate
MC555	MTTL	CF	Expandable 2-Wide 4-Input AND-OR-INVERT Gate
MC556	MTTL	CF	Expandable 8-Input NAND Gate
MC557	MTTL	CF	Line Driver
MC558	MTTL	CF	Quad 2-Input NAND Gate
MC559	MTTL	CF	4-Wide 3-2-2-3 Input Expander for AND-OR-INVERT Gates
MC560	MTTL	CF	Dual 4-Input Expander for AND-OR-INVERT Gates
MC561	MTTL	CF	Dual 4-Input Expander for NAND Gates
MC562	MTTL	CF	Triple 3-Input NAND Gate
MC563	MTTL	CF	R-S Flip-Flop
MC564	MTTL	CF	Gated R-S Flip-Flop
MC565	MTTL	CF	AND J-K Flip-Flop
MC566	MTTL	CF	OR J-K Flip-Flop
MC569	MTTL	CF	Triple 2-Input Bus Driver
MC570	MTTL	CF	Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate
MC571	MTTL	CF	AC Coupled R-S Flip-Flop
MC572	MTTL	CF	Dual Type D Flip-Flop
MC573	MTTL	CF	Dual J-K Flip-Flop (separate clock)
MC574	MTTL	CF	Dual J-K Flip-Flop (common clock)
MC576	MTTL	CF	Dual 3-Input Pulse Shaper/Delay AND Gate
MC577	MTTL	CF	OR Expandable Dual 4-Input AND Gate
MC578	MTTL	CF	Dual 2-Wide 2-3 Input OR Expander
MC579	MTTL	CF	Hex Inverter
MC660	MHTL	DS	Expandable Dual 4-Input NAND Gate (active pullup)
MC661	MHTL	DS	Expandable Dual 4-Input NAND Gate (passive pullup)
MC662	MHTL	DS	Expandable Dual 4-Input Line Driver (NAND)
MC663	MHTL	DS	Dual J-K Flip-Flop
MC664	MHTL	DS	Master-Slave R-S Flip-Flop
MC665	MHTL	DS	Triple Level Translator
MC666	MHTL	DS	Triple Level Translator
MC667	MHTL	DS	Dual Monostable Multivibrator
MC668	MHTL	DS	Quad 2-Input NAND Gate (passive pullup)
MC669	MHTL	DS	Dual 4-Input Expander
MC670	MHTL	DS	Triple 3-Input NAND Gate (passive pullup)
MC671	MHTL	DS	Triple 3-Input NAND Gate (active pullup)
MC672	MHTL	DS	Quad 2-Input NAND Gate (active pullup)
MC673	MHTL	DS	Dual 2-Input AND-OR-INVERT Gate (active pullup)
MC674	MHTL	DS	Dual 2-Input AND-OR-INVERT Gate (passive pullup)
MC675	MHTL	DS	Dual Pulse Stretcher
MC676	MHTL	DS	BCD-To-Decimal Decoder-Driver
MC677	MHTL	DS	Hex Inverter With Strobe (active pullup)
MC678	MHTL	DS	Hex Inverter With Strobe (without output resistors)
MC679,B	MHTL	DS	Dual Lamp/Line Driver
MC680	MHTL	DS	Hex Inverter (active pullup)
MC681	MHTL	DS	Hex Inverter (open collector)
MC682	MHTL	DS	Quad Latch
MC683	MHTL	DS	Quad 2-Input Exclusive OR Gate
MC684	MHTL	DS	Decade Counter
MC685	MHTL	DS	Binary Counter
MC686	MHTL	DS	4-Bit Shift Register
MC688	MHTL	DS	Dual J-K Flip-Flop
MC689	MHTL	DS	Hex Inverter (high voltage)
MC690	MHTL	DS	Hex Inverter (active pullup)
MC691	MHTL	DS	Hex Inverter/Interface Element
MC696	MHTL	DS	Dual Interface Element, Line Driver/Receiver

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC700G,F	MRTL	CF	Buffer
MC701G	MRTL	CF	Counter Adapter
MC702G	MRTL	CF	R-S Flip-Flop
MC703G,F	MRTL	CF	3-Input NOR Gate
MC704G,F	MRTL	CF	Half Adder
MC705G,F	MRTL	CF	Half-Shift Register
MC706G,F	MRTL	CF	Half-Shift Register (w/o inverter)
MC707G,F	MRTL	CF	4-Input NOR Gate
MC708G,F	mW MRTL	CF	Half Adder
MC709G,F	mW MRTL	CF	2-Input Buffer
MC710G,F	mW MRTL	CF	Dual 2-Input NOR Gate
MC711G,F	mW MRTL	CF	4-Input OR/NOR Gate
MC712G,F	mW MRTL	CF	Half Adder
MC713G,F	mW MRTL	CF	Type D Flip-Flop
MC714G,F	MRTL	CF	Dual 2-Input NOR Gate
MC715G,F	MRTL	CF	Dual 3-Input NOR Gate
MC715P	MRTL	DS	Dual 3-Input NOR Gate
MC717F	mW MRTL	CF	Quad 2-Input NOR Gate
MC717P	mW MRTL	DS	Quad 2-Input NOR Gate
MC718G,F	mW MRTL	CF	Dual 3-Input NOR Gate
MC718P	mW MRTL	DS	Dual 3-Input NOR Gate
MC719F	mW MRTL	CF	Dual 4-Input NOR Gate
MC719P	mW MRTL	DS	Dual 4-Input NOR Gate
MC720G,F	mW MRTL	CF	J-K Flip-Flop
MC721G,F	mW MRTL	CF	Dual 2-Input Gate Expander
MC722G,F	mW MRTL	CF	J-K Flip-Flop
MC722P	mW MRTL	DS	J-K Flip-Flop
MC723G,F	MRTL	CF	J-K Flip-Flop
MC723P	MRTL	DS	J-K Flip-Flop
MC724F	MRTL	CF	Quad 2-Input NOR Gate
MC724P,AP	MRTL	DS	Quad 2-Input NOR Gate
MC725F	MRTL	CF	Dual 4-Input NOR Gate
MC725P	MRTL	DS	Dual 4-Input NOR Gate
MC726G,F	MRTL	CF	J-K Flip-Flop
MC726P	MRTL	DS	J-K Flip-Flop
MC727G,F	MRTL	CF	Quad Inverter
MC728G,F	mW MRTL	CF	5-Input NOR Gate
MC729G,F	MRTL	CF	5-Input NOR Gate
MC764P	mW MRTL	DS	Dual Exclusive OR/NOR Gate
MC767P,AP	mW MRTL	DS	Quad Latch
MC770P	mW MRTL	DS	BCD-To-Decimal Decoder
MC771F	MRTL	CF	Quad Exclusive OR Gate
MC771P	MRTL	DS	Quad Exclusive OR Gate
MC774G	MRTL	CF	J-K Flip-Flop
MC775F	MRTL	CF	Dual Half-Adder
MC775P	MRTL	DS	Dual Half-Adder
MC776F	mW MRTL	CF	Dual J-K Flip-Flop
MC776P	mW MRTL	DS	Dual J-K Flip-Flop
MC777P	MRTL	DS	Binary Up Counter
MC778F	mW MRTL	CF	Dual Type D Flip-Flop
MC778P	mW MRTL	DS	Dual Type D Flip-Flop
MC779P	MRTL	DS	1 J-K Flip-Flop, 1 Expander, 2 Buffers
MC780P	MRTL	DS	Decade Up Counter
MC781G	mW MRTL	CF	Dual Buffer
MC782G	mW MRTL	CF	J-K Flip-Flop
MC783F	MRTL	CF	Dual Half-Shift Register
MC783P	MRTL	DS	Dual Half-Shift Register
MC784F	MRTL	CF	Dual Half-Shift Register (w/inverter)
MC784P	MRTL	DS	Dual Half-Shift Register (w/inverter)
MC785F	MRTL	CF	Quad 2-Input Expander
MC785P,AP	MRTL	DS	Quad 2-Input Expander
MC786F	MRTL	CF	Dual 4-Input Expander
MC786P	MRTL	DS	Dual 4-Input Expander
MC787P	MRTL	DS	1 J-K Flip-Flop, 1 Inverter, 2 Buffers
MC788F	MRTL	CF	Dual 3-Input Buffer, non-inverting
MC788P	MRTL	DS	Dual 3-Input Buffer, non-inverting
MC789F	MRTL	CF	Hex Inverter
MC789P,AP	MRTL	DS	Hex Inverter
MC790F	MRTL	CF	Dual J-K Flip-Flop
MC790P	MRTL	DS	Dual J-K Flip-Flop

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC791F	MRTL	CF	Dual J-K Flip-Flop
MC791P	MRTL	DS	Dual J-K Flip-Flop
MC792F	MRTL	CF	Triple 3-Input NOR Gate
MC792P	MRTL	DS	Triple 3-Input NOR Gate
MC793F	mW MRTL	CF	Triple 3-Input NOR Gate
MC793P	mW MRTL	DS	Triple 3-Input NOR Gate
MC794P	MRTL	DS	Serial-Parallel Shift Register
MC796F	MRTL	CF	Dual Full Adder
MC796P	MRTL	DS	Dual Full Adder
MC797F	MRTL	CF	Dual Full Subtractor
MC797P	MRTL	DS	Dual Full Subtractor
MC798F	mW MRTL	CF	Dual 2-Input Buffer
MC798P	mW MRTL	DS	Dual 2-Input Buffer
MC799G,F	MRTL	CF	Dual Buffer
MC799P	MRTL	DS	Dual Buffer
MC800G,F	MRTL	CF	Buffer
MC801G	MRTL	CF	Counter Adapter
MC802G	MRTL	CF	R-S Flip-Flop
MC803G,F	MRTL	CF	3-Input NOR Gate
MC804G,F	MRTL	CF	Half Adder
MC805G,F	MRTL	CF	Half-Shift Register
MC806G,F	MRTL	CF	Half-Shift Register (w/o inverter)
MC807G,F	MRTL	CF	4-Input NOR Gate
MC808G,F	mW MRTL	CF	Half Adder
MC809G,F	mW MRTL	CF	2-Input Buffer
MC810G,F	mW MRTL	CF	Dual 2-Input NOR Gate
MC811G,F	mW MRTL	CF	4-Input OR/NOR Gate
MC812G,F	mW MRTL	CF	Half Adder
MC813G,F	mW MRTL	CF	Type D Flip-Flop
MC814G,F	MRTL	CF	Dual 2-Input NOR Gate
MC815G,F	MRTL	CF	Dual 3-Input NOR Gate
MC815P	MRTL	DS	Dual 3-Input NOR Gate
MC816G,F	MRTL	CF	J-K Flip-Flop
MC816P	MRTL	CF	J-K Flip-Flop
MC817F	mW MRTL	CF	Quad 2-Input NOR Gate
MC817P	mW MRTL	DS	Quad 2-Input NOR Gate
MC818G,F	mW MRTL	CF	Dual 3-Input NOR Gate
MC818P	mW MRTL	DS	Dual 3-Input NOR Gate
MC819F	mW MRTL	CF	Dual 4-Input NOR Gate
MC819P	mW MRTL	DS	Dual 4-Input NOR Gate
MC820G,F	mW MRTL	CF	J-K Flip-Flop
MC821G,F	mW MRTL	CF	Dual 2-Input Gate Expander
MC822G,F	mW MRTL	CF	J-K Flip-Flop
MC822P	mW MRTL	DS	J-K Flip-Flop
MC824F	MRTL	CF	Quad 2-Input NOR Gate
MC824P,AP	MRTL	DS	Quad 2-Input NOR Gate
MC825F	MRTL	CF	Dual 4-Input NOR Gate
MC825P	MRTL	CF	Dual 4-Input NOR Gate
MC826G,F	MRTL	CF	J-K Flip-Flop
MC826P	MRTL	DS	J-K Flip-Flop
MC827G,F	MRTL	CF	Quad Inverter
MC828G,F	mW MRTL	CF	5-Input NOR Gate
MC829G,F	MRTL	CF	5-Input NOR Gate
MC830F,L,P	MDTL	DS	Expandable Dual 4-Input NAND Gate
MC830G	MDTL	DS	Expandable Dual 3-2 Input NAND Gate
MC832F,L,P	MDTL	DS	Expandable Dual 4-Input Buffer
MC832G	MDTL	DS	Expandable Dual 3-2 Input Buffer
MC833F,L,P	MDTL	DS	Dual 4-Input Expander
MC833G	MDTL	DS	Dual 4-3 Input Expander
MC834	MDTL	DS	Hex Inverter
MC835	MDTL	DS	Hex Inverter (without output resistors)
MC836	MDTL	DS	Hex Inverter
MC837	MDTL	DS	Hex Inverter
MC838	MDTL	DS	Decade Counter
MC839	MDTL	DS	Divide-by-Sixteen Counter
MC840	MDTL	DS	Hex Inverter (without input diodes)
MC841	MDTL	DS	Hex Inverter (without output resistors and input diodes)
MC843G	MDTL	DS	4-Input AND Driver with NOR Strobe
MC844F,L,P	MDTL	DS	Expandable Dual 4-Input Power Gate
MC844G	MDTL	DS	Expandable Dual 3-2 Input Power Gate Clocked Flip-Flop

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC845G	MDTL	DS	Clocked Flip-Flop
MC846F,L,P	MDTL	DS	Quad 2-Input NAND Gate
MC846G	MDTL	DS	Quad Inverter
MC847	MDTL	DS	Quad 2-Input Gate Expander
MC848G	MDTL	DS	Clocked Flip-Flop
MC849F,L,P	MDTL	DS	Quad 2-Input NAND Gate (2k pullup resistor)
MC849G	MDTL	DS	Quad Inverter (2k pullup resistor)
MC850G	MDTL	DS	Pulse Triggered Binary
MC851G	MDTL	DS	Monostable Multivibrator
MC852	MDTL	DS	Dual J-K Flip-Flop (common clock and CD, separate SD)
MC853	MDTL	DS	Dual J-K Flip-Flop (separate clock and SD, no CD)
MC855	MDTL	DS	Dual J-K Flip-Flop (common C and CD, sep SD, 2k pullup)
MC856	MDTL	DS	Dual J-K Flip-Flop (separate C and SD, no CD, 2k pullup)
MC857	MDTL	DS	Quad 2-Input Buffer
MC858	MDTL	DS	Quad 2-Input NAND Power Gate
MC861F,L,P	MDTL	DS	Expandable Dual 4-Input NAND Gate (2k pullup resistor)
MC861G	MDTL	DS	Expandable Dual 3-2 Input NAND Gate (2k pullup)
MC862F,L,P	MDTL	DS	Triple 3-Input NAND Gate
MC862G	MDTL	DS	Dual 2-Input NAND Gate plus Inverter
MC863F,L,P	MDTL	DS	Triple 3-Input NAND Gate (2k pullup resistor)
MC863G	MDTL	DS	Dual 2-Input NAND Gate plus Inverter (2k pullup)
MC864P	mW MRTL	DS	Dual Exclusive OR/NOR Gate
MC867P,AP	mW MRTL	DS	Quad Latch
MC870P	mW MRTL	DS	BCD-To-Decimal Decoder
MC871F	MRTL	CF	Quad Exclusive OR Gate
MC871P	MRTL	DS	Quad Exclusive OR Gate
MC874G	MRTL	CF	J-K Flip-Flop
MC875F	MRTL	CF	Dual Half-Adder
MC875P	MRTL	DS	Dual Half-Adder
MC876F	mW MRTL	CF	Dual J-K Flip-Flop
MC876P	mW MRTL	DS	Dual J-K Flip-Flop
MC877P	MRTL	DS	Binary Up Counter
MC878F	mW MRTL	CF	Dual Type D Flip-Flop
MC878P	mW MRTL	DS	Dual Type D Flip-Flop
MC879P	MRTL	DS	1 J-K Flip-Flop, 1 Expander, 2 Buffers
MC880P	MRTL	DS	Decade Up Counter
MC881G	mW MRTL	CF	Dual Buffer
MC882G	mW MRTL	CF	J-K Flip-Flop
MC883F	MRTL	CF	Dual Half-Shift Register
MC883P	MRTL	DS	Dual Half-Shift Register
MC884F	MRTL	CF	Dual Half-Shift Register (w/inverter)
MC884P	MRTL	DS	Dual Half-Shift Register (w/inverter)
MC885F	MRTL	CF	Quad 2-Input Expander
MC885P,AP	MRTL	DS	Quad 2-Input Expander
MC886F	MRTL	CF	Dual 4-Input Expander
MC886P	MRTL	DS	Dual 4-Input Expander
MC887P	MRTL	DS	1 J-K Flip-Flop, 1 Inverter, 2 Buffers
MC888F	MRTL	CF	Dual 3-Input Buffer, non-inverting
MC888P	MRTL	DS	Dual 3-Input Buffer, non-inverting
MC889F	MRTL	CF	Hex Inverter
MC889P,AP	MRTL	DS	Hex Inverter
MC890F	MRTL	CF	Dual J-K Flip-Flop
MC890P	MRTL	DS	Dual J-K Flip-Flop
MC891F	MRTL	CF	Dual J-K Flip-Flop
MC891P	MRTL	DS	Dual J-K Flip-Flop
MC892F	MRTL	CF	Triple 3-Input NOR Gate
MC892P	MRTL	DS	Triple 3-Input NOR Gate
MC893F	mW MRTL	CF	Triple 3-Input NOR Gate
MC893P	mW MRTL	DS	Triple 3-Input NOR Gate
MC894P	MRTL	DS	Serial-Parallel Shift Register
MC896F	MRTL	CF	Dual Full Adder
MC896P	MRTL	DS	Dual Full Adder
MC897F	MRTL	CF	Dual Full Subtractor
MC897P	MRTL	DS	Dual Full Subtractor
MC898F	mW MRTL	CF	Dual 2-Input Buffer
MC898P	mW MRTL	DS	Dual 2-Input Buffer
MC899G,F	MRTL	CF	Dual Buffer
MC899P	MRTL	DS	Dual Buffer
MC900G,F	MRTL	CF	Buffer
MC901G	MRTL	CF	Counter Adapter

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC902G	MRTL	CF	R-S Flip-Flop
MC903G,F	MRTL	CF	3-Input NOR Gate
MC904G,F	MRTL	CF	Half Adder
MC905G,F	MRTL	CF	Half-Shift Register
MC906G,F	MRTL	CF	Half-Shift Register (w/o inverter)
MC907G,F	MRTL	CF	4-Input NOR Gate
MC908G,F	mW MRTL	CF	Half Adder
MC909G,F	mW MRTL	CF	2-Input Buffer
MC910G,F	mW MRTL	CF	Dual 2-Input NOR Gate
MC911G,F	mW MRTL	CF	4-Input OR/NOR Gate
MC912G,F	mW MRTL	CF	Half Adder
MC913G,F	mW MRTL	CF	Type D Flip-Flop
MC914G,F	MRTL	CF	Dual 2-Input NOR Gate
MC915G,F	MRTL	CF	Dual 3-Input NOR Gate
MC916G,F	MRTL	CF	J-K Flip-Flop
MC917F	mW MRTL	CF	Quad 2-Input NOR Gate
MC918G,F	mW MRTL	CF	Dual 3-Input NOR Gate
MC919F	mW MRTL	CF	Dual 4-Input NOR Gate
MC920G,F	mW MRTL	CF	J-K Flip-Flop
MC921G,F	mW MRTL	CF	Dual 2-Input Gate Expander
MC922G,F	mW MRTL	CF	J-K Flip-Flop
MC924F	MRTL	CF	Quad 2-Input NOR Gate
MC925F	MRTL	CF	Dual 4-Input NOR Gate
MC926G,F	MRTL	CF	J-K Flip-Flop
MC927G,F	MRTL	CF	Quad Inverter
MC928G,F	mW MRTL	CF	5-Input NOR Gate
MC929G,F	MRTL	CF	5-Input NOR Gate
MC930F,L	MDTL	DS	Expandable Dual 4-Input NAND Gate
MC930G	MDTL	DS	Expandable Dual 3-2 Input NAND Gate
MC932F,L	MDTL	DS	Expandable Dual 4-Input Buffer
MC932G	MDTL	DS	Expandable Dual 3-2 Input Buffer
MC933F,L	MDTL	DS	Dual 4-Input Expander
MC933G	MDTL	DS	Dual 4-3 Input Expander
MC934	MDTL	DS	Hex Inverter
MC935	MDTL	DS	Hex Inverter (without output resistors)
MC936	MDTL	DS	Hex Inverter
MC937	MDTL	DS	Hex Inverter
MC938	MDTL	DS	Decade Counter
MC939	MDTL	DS	Divide-by-Sixteen Counter
MC940	MDTL	DS	Hex Inverter (without input diodes)
MC941	MDTL	DS	Hex Inverter (without output resistors and input diodes)
MC943G	MDTL	DS	4-Input AND Driver with NOR Strobe
MC944F,L	MDTL	DS	Expandable Dual 4-Input Power Gate
MC944G	MDTL	DS	Expandable Dual 3-2 Input Power Gate Clocked Flip-Flop
MC945G	MDTL	DS	Clocked Flip-Flop
MC946F,L	MDTL	DS	Quad 2-Input NAND Gate
MC946G	MDTL	DS	Quad Inverter
MC947	MDTL	DS	Quad 2-Input Gate Expander
MC948G	MDTL	DS	Clocked Flip-Flop
MC949F,L	MDTL	DS	Quad 2-Input NAND Gate (2k pullup resistor)
MC949G	MDTL	DS	Quad Inverter (2k pullup resistor)
MC950G	MDTL	DS	Pulse Triggered Binary
MC951G	MDTL	DS	Monostable Multivibrator
MC952	MDTL	DS	Dual J-K Flip-Flop (common clock and CD, separate SD)
MC953	MDTL	DS	Dual J-K Flip-Flop (separate clock and SD, no CD)
MC955	MDTL	DS	Dual J-K Flip-Flop (common C and CD, sep SD, 2k pullup)
MC956	MDTL	DS	Dual J-K Flip-Flop (separate C and SD, no CD, 2k pullup)
MC957	MDTL	DS	Quad 2-Input Buffer
MC958	MDTL	DS	Quad 2-Input NAND Power Gate
MC961F,L	MDTL	DS	Expandable Dual 4-Input NAND Gate (2k pullup resistor)
MC961G	MDTL	DS	Expandable Dual 3-2 Input NAND Gate (2k pullup)
MC962F,L	MDTL	DS	Triple 3-Input NAND Gate
MC962G	MDTL	DS	Dual 2-Input NAND Gate plus Inverter
MC963F,L	MDTL	DS	Triple 3-Input NAND Gate (2k pullup resistor)
MC963G	MDTL	DS	Dual 2-Input NAND Gate plus Inverter (2k pullup)
MC971F	MRTL	CF	Quad Exclusive OR Gate
MC974G	MRTL	CF	J-K Flip-Flop
MC975F	MRTL	CF	Dual Half-Adder
MC976F	mW MRTL	CF	Dual J-K Flip-Flop
MC978F	mW MRTL	CF	Dual Type D Flip-Flop

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC981G	mW MRTL	CF	Dual Buffer
MC982G	mW MRTL	CF	J-K Flip-Flop
MC983F	MRTL	CF	Dual Half-Shift Register
MC984F	MRTL	CF	Dual Half-Shift Register (w/inverter)
MC985F	MRTL	CF	Quad 2-Input Expander
MC986F	MRTL	CF	Dual 4-Input Expander
MC988F	MRTL	CF	Dual 3-Input Buffer, non-inverting
MC989F	MRTL	CF	Hex Inverter
MC990F	MRTL	CF	Dual J-K Flip-Flop
MC991F	MRTL	CF	Dual J-K Flip-Flop
MC992F	MRTL	CF	Triple 3-Input NOR Gate
MC993F	mW MRTL	CF	Triple 3-Input NOR Gate
MC996F	MRTL	CF	Dual Full Adder
MC997F	MRTL	CF	Dual Full Subtractor
MC998F	mW MRTL	CF	Dual 2-Input Buffer
MC999G,F	MRTL	CF	Dual Buffer
MC1303	Linear	DB	Dual Stereo Preamplifier
MC1304	Linear	DB	FM Multiplex Stereo Demodulator
MC1305	Linear	DB	FM Multiplex Stereo Demodulator
MC1306	Linear	DB	1/2-Watt Audio Amplifier
MC1307	Linear	DB	FM Multiplex Stereo Demodulator
MC1310	Linear	DB	FM Stereo Demodulator
MC1312	Linear	DB	Four-Channel SQ* Decoder
MC1313	Linear	DB	Four-Channel SQ* Decoder
MC1314	Linear	DB	Four-Channel Audio Voltage-Controlled Amplifier
MC1315	Linear	DB	Four-Channel Audio Logic Circuit
MC1324	Linear	DB	Dual Doubly Balanced Chroma Demodulator
MC1326	Linear	DB	Dual Doubly Balanced Chroma Demodulator
MC1327	Linear	DB	Dual Doubly Balanced Chroma Demodulator
MC1328	Linear	DB	Dual Doubly Balanced Chroma Demodulator
MC1329	Linear	DB	Dual Doubly Balanced Chroma Demodulator
MC1330	Linear	DB	Low-Level Video Detector
MC1339	Linear	DB	Dual Low-Noise Stereo Preamplifier
MC1344	Linear	DB	TV Signal Processor
MC1349	Linear	DB	IF Amplifier
MC1350	Linear	DB	IF Amplifier
MC1351	Linear	DB	TV Sound Circuit
MC1352	Linear	DB	TV Video IF Amplifier
MC1353	Linear	DB	TV Video IF Amplifier
MC1355	Linear	DB	Limiting FM IF Amplifier
MC1356	Linear	DB	FM Detector/Limiter
MC1357	Linear	DB	IF Amplifier and Quadrature Detector
MC1358	Linear	DB	TV Sound IF Amplifier
MC1359	Linear	DB	TV Sound System
MC1364	Linear	DB	Automatic Frequency Control
MC1370	Linear	DB	TV Chroma Subcarrier Regenerator
MC1371	Linear	DB	TV Chroma IF Amplifier
MC1375	Linear	DB	FM IF Circuit
MC1385	Linear	DB	Class B Audio Driver
MC1391	Linear	DB	TV Horizontal Processor
MC1394	Linear	DB	TV Horizontal Processor
MC1395	Linear	DB	PAL Chroma
MC1396	Linear	DB	PAL Luma
MC1398	Linear	DB	TV Color Processing Circuit
MC1405	Linear	DS	Analog-to-Digital Converter Subsystem
MC1406	Linear	DB	Six-Bit Multiplying Digital-to-Analog Converter
MC1408	Linear	DB	Eight-Bit Multiplying Digital-to-Analog Converter
MC1410	Linear	DB	Video Amplifier
MC1414	Linear	DB	Dual Differential Comparator
MC1420	Linear	DB	Operational Amplifier
MC1430	Linear	DB	Operational Amplifier
MC1431	Linear	DB	Operational Amplifier
MC1433	Linear	DB	Operational Amplifier
MC1435	Linear	DB	Dual Operational Amplifier
MC1436	Linear	DB	Operational Amplifier
MC1436C	Linear	DB	Operational Amplifier
MC1437	Linear	DB	Operational Amplifier
MC1438	Linear	DB	Power Booster
MC1439	Linear	DB	Operational Amplifier

*Trademark of Columbia Broadcasting System, Inc.

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC1440	Linear	DB	Core-Memory Sense Amplifier
MC1441	Linear	DB	Sense Amplifier
MC1444	Linear	DB	AC-Coupled 4-Channel Sense Amplifier
MC1445	Linear	DB	Wideband Amplifier
MC1454	Linear	DB	1-Watt Power Amplifier
MC1455	Linear	DB	Timing Circuit
MC1456	Linear	DB	Operational Amplifier
MC1456C	Linear	DB	Operational Amplifier
MC1458	Linear	DB	Dual Operational Amplifier
MC1458C	Linear	DB	Dual Operational Amplifier
MC1460	Linear	DB	Positive Voltage Regulator
MC1461	Linear	DB	Positive Voltage Regulator
MC1463	Linear	DB	Negative Voltage Regulator
MC1466	Linear	DB	Voltage and Current Regulator
MC1468	Linear	DB	Dual ± 15-Volt Tracking Regulator
MC1469	Linear	DB	Positive Voltage Regulator
MC1488	Linear	DB	Quad MDTL Line Driver
MC1489	Linear	DB	Quad MDTL Line Receiver
MC1489A	Linear	DB	Quad MDTL Line Receiver
MC1494	Linear	DB	Four-Quadrant Multiplier
MC1495	Linear	DB	Four-Quadrant Multiplier
MC1496	Linear	DB	Balanced Modulator-Demodulator
MC1505	Linear	DS	Analog-to-Digital Converter Subsystem
MC1506	Linear	DB	Six-Bit Multiplying Digital-to-Analog Converter
MC1508	Linear	DB	Eight-Bit Multiplying Digital-to-Analog Converter
MC1510	Linear	DB	Video Amplifier
MC1514	Linear	DB	Dual Differential Comparator
MC1520	Linear	DB	Operational Amplifier
MC1530	Linear	DB	Operational Amplifier
MC1531	Linear	DB	Operational Amplifier
MC1533	Linear	DB	Operational Amplifier
MC1535	Linear	DB	Dual Operational Amplifier
MC1536	Linear	DB	Operational Amplifier
MC1537	Linear	DB	Operational Amplifier
MC1538	Linear	DB	Power Booster
MC1539	Linear	DB	Operational Amplifier
MC1540	Linear	DB	Core-Memory Sense Amplifier
MC1541	Linear	DB	Sense Amplifier
MC1543	Linear	DB	Dual Sense Amplifier
MC1544	Linear	DB	AC-Coupled 4-Channel Sense Amplifier
MC1545	Linear	DB	Wideband Amplifier
MC1550	Linear	DB	RF-IF Amplifier
MC1552	Linear	DB	Video Amplifier
MC1553	Linear	DB	Video Amplifier
MC1554	Linear	DB	1-Watt Power Amplifier
MC1555	Linear	DB	Timing Circuit
MC1556	Linear	DB	Operational Amplifier
MC1558	Linear	DB	Dual Operational Amplifier
MC1560	Linear	DB	Positive Voltage Regulator
MC1561	Linear	DB	Positive Voltage Regulator
MC1563	Linear	DB	Negative Voltage Regulator
MC1566	Linear	DB	Voltage and Current Regulator
MC1568	Linear	DB	Dual ± 15-Volt Tracking Regulator
MC1569	Linear	DB	Positive Voltage Regulator
MC1590	Linear	DB	Wideband Amplifier with AGC
MC1594	Linear	DB	Four-Quadrant Multiplier
MC1595	Linear	DB	Four-Quadrant Multiplier
MC1596	Linear	DB	Balanced Modulator-Demodulator
MC1648	MECL	V4	Voltage Controlled Oscillator
MC1650	MECL	V4	Dual A/D Comparator
MC1651	MECL	V4	Dual A/D Comparator
MC1654	MECL	V4	Binary Counter
MC1658	MECL	V4	Voltage-Controlled Multivibrator
MC1660	MECL	V4	Dual 4-Input OR/NOR Gate
MC1662	MECL	V4	Quad 2-Input NOR Gate
MC1664	MECL	V4	Quad 2-Input OR Gate
MC1666	MECL	V4	Dual Clocked R-S Flip-Flop
MC1668	MECL	V4	Dual Clocked Latch
MC1670	MECL	V4	Master-Slave Type D Flip-Flop

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC1672	MECL	V4	Triple 2-Input Exclusive OR Gate
MC1674	MECL	V4	Triple 2-Input Exclusive NOR Gate
MC1678	MECL	V4	Bi-Quinary Counter
MC1688	MECL	V4	Dual 4-5-Input OR/NOR Gate
MC1690	MECL	V4	UHF Prescaler Type D Flip-Flop
MC1692	MECL	V4	Quad Line Receiver
MC1694	MECL	V4	4-Bit Shift Register
MC1696	MECL	DS	1 GHz Divide-By-Ten Counter
MC1709	Linear	DB	Operational Amplifier
MC1709A	Linear	DS	Operational Amplifier
MC1709C	Linear	DB	Operational Amplifier
MC1710	Linear	DB	Differential Comparator
MC1710C	Linear	DB	Differential Comparator
MC1711	Linear	DB	Dual Differential Comparator
MC1711C	Linear	DB	Dual Differential Comparator
MC1712	Linear	DB	Wideband DC Amplifier
MC1712C	Linear	DB	Wideband DC Amplifier
MC1723	Linear	DB	Positive Voltage Regulator
MC1723C	Linear	DB	Positive Voltage Regulator
MC1733	Linear	DB	Differential Video Amplifier
MC1733C	Linear	DB	Differential Video Amplifier
MC1741	Linear	DB	Operational Amplifier
MC1741C	Linear	DB	Operational Amplifier
MC1741S	Linear	DB	High-Slew-Rate Operational Amplifier
MC1741SC	Linear	DB	High-Slew-Rate Operational Amplifier
MC1747	Linear	DB	Dual Operational Amplifier
MC1747C	Linear	DB	Dual Operational Amplifier
MC1748	Linear	DB	Operational Amplifier
MC1748C	Linear	DB	Operational Amplifier
MC1776	Linear	DB	Programmable Operational Amplifier
MC1776C	Linear	DB	Programmable Operational Amplifier
MC1800	MDTL	DS	Dual 6-Input NAND Gate
MC1801	MDTL	DS	Dual 5-Input NAND Gate (2k pullup resistor)
MC1802	MDTL	DS	Expandable 8-Input NAND Gate
MC1803	MDTL	DS	Expandable 8-Input NAND Gate (2k pullup resistor)
MC1804	MDTL	DS	10-Input NAND Gate
MC1805	MDTL	DS	10-Input NAND Gate (2k pullup resistor)
MC1806	MDTL	DS	Quad 2-Input AND Gate
MC1807	MDTL	DS	Quad 2-Input AND Gate (2k pullup resistor)
MC1808	MDTL	DS	Quad 2-Input OR Gate
MC1809	MDTL	DS	Quad 2-Input OR Gate (2k pullup resistor)
MC1810	MDTL	DS	Quad 2-Input NOR Gate
MC1811	MDTL	DS	Quad 2-Input NOR Gate (2k pullup resistor)
MC1812	MDTL	DS	Quad 2-Input Exclusive OR Gate
MC1813	MDTL	DS	Quad Latch
MC1814	MDTL	DS	Quad Latch
MC1815	MDTL	DS	Parallel Gated Clocked Flip-Flop
MC1816	MDTL	DS	Parallel Gated Clocked Flip-Flop
MC1818	MDTL	DS	Quad 2-Input NAND Gate (without output resistor)
MC1820	MDTL	DS	High Voltage Hex Inverter
MC1900	MDTL	DS	Dual 6-Input NAND Gate
MC1901	MDTL	DS	Dual 5-Input NAND Gate (2k pullup resistor)
MC1902	MDTL	DS	Expandable 8-Input NAND Gate
MC1903	MDTL	DS	Expandable 8-Input NAND Gate (2k pullup resistor)
MC1904	MDTL	DS	10-Input NAND Gate
MC1905	MDTL	DS	10-Input NAND Gate (2k pullup resistor)
MC1906	MDTL	DS	Quad 2-Input AND Gate
MC1907	MDTL	DS	Quad 2-Input AND Gate (2k pullup resistor)
MC1908	MDTL	DS	Quad 2-Input OR Gate
MC1909	MDTL	DS	Quad 2-Input OR Gate (2k pullup resistor)
MC1910	MDTL	DS	Quad 2-Input NOR Gate
MC1911	MDTL	DS	Quad 2-Input NOR Gate (2k pullup resistor)
MC1912	MDTL	DS	Quad 2-Input Exclusive OR Gate
MC1914	MDTL	DS	Quad Latch
MC1915	MDTL	DS	Parallel Gated Clocked Flip-Flop
MC1916	MDTL	DS	Parallel Gated Clocked Flip-Flop
MC1918	MDTL	DS	Quad 2-Input NAND Gate (without output resistor)
MC2000	MTTL	CF	Expandable 2-Wide 4-Input AND-OR-INVERT Gate
MC2001	MTTL	CF	Quad 2-Input NAND Gate
MC2002	MTTL	CF	4-Wide 3-2-2-3 Input Expander for AND-OR-INVERT Gates

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC2003	MTTL	CF	Dual 4-Input NAND Gate
MC2004	MTTL	CF	Expandable 4-Wide 2-2-2-3 Input AND-OR-INVERT Gate
MC2005	MTTL	CF	8-Input NAND Gate
MC2006	MTTL	CF	Dual 4-Input Expander for AND-OR-INVERT Gates
MC2007	MTTL	CF	Triple 3-Input NAND Gate
MC2011	MTTL	CF	Expandable 8-Input NAND Gate
MC2012	MTTL	CF	Expandable 3-Wide 3-Input AND-OR-INVERT Gate
MC2013	MTTL	CF	Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate
MC2016	MTTL	CF	Hex Inverter
MC2023	MTTL	CF	Dual J-K Flip-Flop (separate clock)
MC2024	MTTL	CF	Dual J-K Flip-Flop (common clock)
MC2025	MTTL	CF	AND J-K Flip-Flop
MC2026	MTTL	CF	OR J-K Flip-Flop
MC2028	MTTL	CF	OR J-K Flip-Flop
MC2050	MTTL	CF	Expandable 2-Wide 4-Input AND-OR-INVERT Gate
MC2051	MTTL	CF	Quad 2-Input NAND Gate
MC2052	MTTL	CF	4-Wide 3-2-2-3 Input Expander for AND-OR-INVERT Gates
MC2053	MTTL	CF	Dual 4-Input NAND Gate
MC2054	MTTL	CF	Expandable 4-Wide 2-2-2-3 Input AND-OR-INVERT Gate
MC2055	MTTL	CF	8-Input NAND Gate
MC2056	MTTL	CF	Dual 4-Input Expander for AND-OR-INVERT Gates
MC2057	MTTL	CF	Triple 3-Input NAND Gate
MC2061	MTTL	CF	Expandable 8-Input NAND Gate
MC2062	MTTL	CF	Expandable 3-Wide 3-Input AND-OR-INVERT Gate
MC2063	MTTL	CF	Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate
MC2065	MTTL	CF	Quad 2-Input Lamp/Line Driver
MC2066	MTTL	CF	Hex Inverter
MC2073	MTTL	CF	Dual J-K Flip-Flop (separate clock)
MC2074	MTTL	CF	Dual J-K Flip-Flop (common clock)
MC2075	MTTL	CF	AND J-K Flip-Flop
MC2076	MTTL	CF	OR J-K Flip-Flop
MC2078	MTTL	CF	OR J-K Flip-Flop
MC2100	MTTL	CF	Expandable 2-Wide 4-Input AND-OR-INVERT Gate
MC2101	MTTL	CF	Quad 2-Input NAND Gate
MC2102	MTTL	CF	4-Wide 3-2-2-3 Input Expander for AND-OR-INVERT Gates
MC2103	MTTL	CF	Dual 4-Input NAND Gate
MC2104	MTTL	CF	Expandable 4-Wide 2-2-2-3 Input AND-OR-INVERT Gate
MC2105	MTTL	CF	8-Input NAND Gate
MC2106	MTTL	CF	Dual 4-Input Expander for AND-OR-INVERT Gates
MC2107	MTTL	CF	Triple 3-Input NAND Gate
MC2111	MTTL	CF	Expandable 8-Input NAND Gate
MC2112	MTTL	CF	Expandable 3-Wide 3-Input AND-OR-INVERT Gate
MC2113	MTTL	CF	Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate
MC2116	MTTL	CF	Hex Inverter
MC2123	MTTL	CF	Dual J-K Flip-Flop (separate clock)
MC2124	MTTL	CF	Dual J-K Flip-Flop (common clock)
MC2125	MTTL	CF	AND J-K Flip-Flop
MC2126	MTTL	CF	OR J-K Flip-Flop
MC2128	MTTL	CF	OR J-K Flip-Flop
MC2150	MTTL	CF	Expandable 2-Wide 4-Input AND-OR-INVERT Gate
MC2151	MTTL	CF	Quad 2-Input NAND Gate
MC2152	MTTL	CF	4-Wide 3-2-2-3 Input Expander for AND-OR-INVERT Gates
MC2153	MTTL	CF	Dual 4-Input NAND Gate
MC2154	MTTL	CF	Expandable 4-Wide 2-2-2-3 Input AND-OR-INVERT Gate
MC2155	MTTL	CF	8-Input NAND Gate
MC2156	MTTL	CF	Dual 4-Input Expander for AND-OR-INVERT Gates
MC2157	MTTL	CF	Triple 3-Input NAND Gate
MC2161	MTTL	CF	Expandable 8-Input NAND Gate
MC2162	MTTL	CF	Expandable 3-Wide 3-Input AND-OR-INVERT Gate
MC2163	MTTL	CF	Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate
MC2165	MTTL	CF	Quad 2-Input Lamp/Line Driver
MC2166	MTTL	CF	Hex Inverter
MC2173	MTTL	CF	Dual J-K Flip-Flop (separate clock)
MC2174	MTTL	CF	Dual J-K Flip-Flop (common clock)
MC2175	MTTL	CF	AND J-K Flip-Flop
MC2176	MTTL	CF	OR J-K Flip-Flop
MC2178	MTTL	CF	OR J-K Flip-Flop
MC2257	MOS	DS	Terminal Transmitter
MC2259	MOS	DS	Terminal Receiver
MC2260	MOS	DS	Terminal Transmitter

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC3000	MTTL	CF	Quad 2-Input NAND Gate
MC3001	MTTL	CF	Quad 2-Input AND Gate
MC3002	MTTL	CF	Quad 2-Input NOR Gate
MC3003	MTTL	CF	Quad 2-Input OR Gate
MC3004	MTTL	CF	Quad 2-Input NAND Gate (Open Collector)
MC3005	MTTL	CF	Triple 3-Input NAND Gate
MC3006	MTTL	CF	Triple 3-Input AND Gate
MC3007	MTTL	CF	Triple 3-Input NAND Gate (Open Collector)
MC3008	MTTL	CF	Hex Inverter
MC3009	MTTL	CF	Hex Inverter
MC3010	MTTL	CF	Dual 4-Input NAND Gate
MC3011	MTTL	CF	Dual 4-Input AND Gate
MC3012	MTTL	CF	Dual 4-Input NAND Gate (Open Collector)
MC3015	MTTL	CF	8-Input NAND Gate
MC3016	MTTL	CF	8-Input NAND Gate
MC3018	MTTL	CF	4-Wide 3-2-2-3 Input Expander For AND-OR-INVERT Gates
MC3019	MTTL	CF	Triple 3-Input Expander For AND-OR Gates
MC3020	MTTL	CF	Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate
MC3021	MTTL	CF	Quad 2-Input Exclusive OR Gate
MC3022	MTTL	CF	Quad 2-Input Exclusive NOR Gate
MC3023	MTTL	CF	Dual 2-Wide 2-Input AND-OR-INVERT Gate
MC3024	MTTL	CF	Dual 4-Input NAND Buffer Gate
MC3025	MTTL	CF	Dual 4-Input NAND Power Gate
MC3026	MTTL	CF	Dual 4-Input AND Power Gate
MC3028	MTTL	CF	Dual 3-Input 3-Output AND Series Terminated Line Driver
MC3029	MTTL	CF	Dual 3-Input 3-Output NAND Series Terminated Line Driver
MC3030	MTTL	CF	Dual 4-Input Expander for AND-OR-INVERT Gates
MC3031	MTTL	CF	Expandable 4-Wide 2-2-2-3 Input AND-OR Gate
MC3032	MTTL	CF	Expandable 4-Wide 2-2-2-3 Input AND-OR-INVERT Gate
MC3033	MTTL	CF	4-Wide 2-2-2-3 Input AND-OR-INVERT Gate
MC3034	MTTL	CF	Expandable 2-Wide 4-Input AND-OR-INVERT Gate
MC3050	MTTL	CF	AND J-K Flip-Flop
MC3051	MTTL	CF	AND Input J-K Flip-Flop
MC3052	MTTL	CF	AND Input JJ-KK Flip-Flop
MC3053	MTTL	CF	Double-Edge-Triggered Master-Slave Type D Flip-Flop
MC3054	MTTL	CF	OR Input J-K Flip-Flop
MC3055	MTTL	CF	AND Input J-K Flip-Flop
MC3060	MTTL	CF	Dual Type D Flip-Flop
MC3061	MTTL	CF	Dual J-K Flip-Flop
MC3062	MTTL	CF	Dual J-K Flip-Flop
MC3063	MTTL	CF	Dual J-K Flip-Flop
MC3100	MTTL	CF	Quad 2-Input NAND Gate
MC3101	MTTL	CF	Quad 2-Input AND Gate
MC3102	MTTL	CF	Quad 2-Input NOR Gate
MC3103	MTTL	CF	Quad 2-Input OR Gate
MC3104	MTTL	CF	Quad 2-Input NAND Gate (Open Collector)
MC3105	MTTL	CF	Triple 3-Input NAND Gate
MC3106	MTTL	CF	Triple 3-Input AND Gate
MC3107	MTTL	CF	Triple 3-Input NAND Gate (Open Collector)
MC3108	MTTL	CF	Hex Inverter
MC3109	MTTL	CF	Hex Inverter
MC3110	MTTL	CF	Dual 4-Input NAND Gate
MC3111	MTTL	CF	Dual 4-Input AND Gate
MC3112	MTTL	CF	Dual 4-Input NAND Gate (Open Collector)
MC3115	MTTL	CF	8-Input NAND Gate
MC3116	MTTL	CF	8-Input NAND Gate
MC3118	MTTL	CF	4-Wide 3-2-2-3 Input Expander For AND-OR-INVERT Gates
MC3119	MTTL	CF	Triple 3-Input Expander For AND-OR Gates
MC3120	MTTL	CF	Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate
MC3121	MTTL	CF	Quad 2-Input Exclusive OR Gate
MC3122	MTTL	CF	Quad 2-Input Exclusive NOR Gate
MC3123	MTTL	CF	Dual 2-Wide 2-Input AND-OR-INVERT Gate
MC3124	MTTL	CF	Dual 4-Input NAND Buffer Gate
MC3125	MTTL	CF	Dual 4-Input NAND Power Gate
MC3126	MTTL	CF	Dual 4-Input AND Power Gate
MC3128	MTTL	CF	Dual 3-Input 3-Output AND Series Terminated Line Driver
MC3129	MTTL	CF	Dual 3-Input 3-Output NAND Series Terminated Line Driver
MC3130	MTTL	CF	Dual 4-Input Expander for AND-OR-INVERT Gates
MC3131	MTTL	CF	Expandable 4-Wide 2-2-2-3 Input AND-OR Gate
MC3132	MTTL	CF	Expandable 4-Wide 2-2-2-3 Input AND-OR-INVERT Gate

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC3133	MTTL	CF	4-Wide 2-2-2-3 Input AND-OR-INVERT Gate
MC3134	MTTL	CF	Expandable 2-Wide 4-Input AND-OR-INVERT Gate
MC3150	MTTL	CF	AND J-K Flip-Flop
MC3151	MTTL	CF	AND Input J-K Flip-Flop
MC3152	MTTL	CF	AND Input JJ-KK Flip-Flop
MC3153	MTTL	CF	Double-Edge-Triggered Master-Slave Type D Flip-Flop
MC3154	MTTL	CF	OR Input J-K Flip-Flop
MC3155	MTTL	CF	AND Input J-K Flip-Flop
MC3160	MTTL	CF	Dual Type D Flip-Flop
MC3161	MTTL	CF	Dual J-K Flip-Flop
MC3162	MTTL	CF	Dual J-K Flip-Flop
MC3163	MTTL	CF	Dual J-K Flip-Flop
MC3301	Linear	DB	Quad Operational Amplifier
MC3302	Linear	DB	Quad Comparator
MC3401	Linear	DB	Quad Operational Amplifier
MC3403	Linear	DS	Quad Operational Amplifier
MC3430	Linear	DB	High-Speed Quad Comparator
MC3431	Linear	DB	High-Speed Quad Comparator
MC3432	Linear	DB	High-Speed Quad Comparator
MC3433	Linear	DB	High-Speed Quad Comparator
MC3437	Linear	DS	Hex Unified Bus Receiver
MC3438	Linear	DS	Quad Unified Bus Transceiver
MC3440	Linear	DS	Quad Interface Bus Transceiver
MC3441	Linear	DS	Quad Interface Bus Transceiver
MC3443	Linear	DS	Quad Interface Bus Transceiver
MC3450	Linear	DB	Quad Line Receiver
MC3452	Linear	DB	Quad Line Receiver
MC3453	Linear	DB	Quad Line Driver
MC3459	Linear	DB	Quad NMOS Memory Driver
MC3460	Linear	DB	Quad NMOS Memory Driver
MC3462	Linear	DB	Quad MECL Line Receiver
MC3463	Linear	DB	Quad MECL Line Driver
MC3476	Linear	DS	Operational Amplifier
MC3503	Linear	DS	Quad Operational Amplifier
MC3570	Linear	DB	High-Slew Operational Amplifier
MC4000	MTTL	CF	Dual 4-Channel Data Selector
MC4001	MTTL	CF	BCD-to-Binary/Binary-to-BCD Number Converter
MC4002	MTTL	CF	Dual Data Distributor
MC4004	MTTL	CF	16-Bit Scratch Pad Memory Cell
MC4005	MTTL	CF	16-Bit Scratch Pad Memory Cell
MC4006	MTTL	CF	Binary to One-of-Eight Line Decoder
MC4007	MTTL	CF	Dual Binary to One-of-Four Line Decoder
MC4008	MTTL	CF	8-Bit Parity Tree
MC4010	MTTL	CF	Dual 4-Bit Parity Tree
MC4012	MTTL	CF	4-Bit Shift Register
MC4015	MTTL	CF	Quad Type D Flip-Flop
MC4016	MTTL	CF	Programmable Modulo-N Decade Counter
MC4018	MTTL	CF	Programmable Modulo-N Hexadecimal Counter
MC4021	MTTL	CF	Dual 4-Bit Comparator (Open Collector)
MC4022	MTTL	CF	Dual 4-Bit Comparator
MC4023	MTTL	CF	4-Bit Universal Counter
MC4024	MTTL	CF	Dual Voltage-Controlled Multivibrator
MC4026	MTTL	CF	Full Adder
MC4027	MTTL	CF	Full Adder
MC4028	MTTL	CF	Adder (Dependent Carry)
MC4029	MTTL	CF	Adder (Dependent Carry)
MC4030	MTTL	CF	Adder (Independent Carry)
MC4031	MTTL	CF	Adder (Independent Carry)
MC4032	MTTL	CF	Carry Decoder
MC4035	MTTL	CF	Quad Latch (Open Collector)
MC4037	MTTL	CF	Quad Latch
MC4038	MTTL	CF	Inverting/Non-Inverting One-of-Eight Decoder
MC4040	MTTL	CF	Binary to Two-of-Eight Decoder
MC4041	MTTL	CF	Single-Error Hamming Code Detector and Generator
MC4042	MTTL	CF	Quad Predriver
MC4043	MTTL	CF	Dual Line Selector
MC4044	MTTL	CF	Phase-Frequency Detector
MC4048	MTTL	CF	Non-Inverting One-of-Eight Decoder

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC4050	MTTL	CF	Counter-Latch Decoder
MC4051	MTTL	CF	Counter-Latch Decoder
MC4062	MTTL	CF	Dual Majority Logic Gate
MC4300	MTTL	CF	Dual 4-Channel Data Selector
MC4304	MTTL	CF	16-Bit Scratch Pad Memory Cell
MC4305	MTTL	CF	16-Bit Scratch Pad Memory Cell
MC4306	MTTL	CF	Binary to One-of-Eight Line Decoder
MC4307	MTTL	CF	Dual Binary to One-of-Four Line Decoder
MC4308	MTTL	CF	8-Bit Parity Tree
MC4309	MTTL	CF	Seven-Segment Character Generator
MC4310	MTTL	CF	Dual 4-Bit Parity Tree
MC4316	MTTL	CF	Programmable Modulo-N Decade Counter
MC4318	MTTL	CF	Programmable Modulo-N Hexadecimal Counter
MC4324	MTTL	CF	Dual Voltage-Controlled Multivibrator
MC4326	MTTL	CF	Full Adder
MC4327	MTTL	CF	Full Adder
MC4328	MTTL	CF	Adder (Dependent Carry)
MC4329	MTTL	CF	Adder (Dependent Carry)
MC4330	MTTL	CF	Adder (Independent Carry)
MC4331	MTTL	CF	Adder (Independent Carry)
MC4332	MTTL	CF	Carry Decoder
MC4335	MTTL	CF	Quad Latch (Open Collector)
MC4337	MTTL	CF	Quad Latch
MC4344	MTTL	CF	Phase-Frequency Detector
MC4350	MTTL	CF	Counter-Latch Decoder
MC5400	MTTL	CF	Quad 2-Input NAND Gate
MC5401	MTTL	CF	Quad 2-Input NAND Gate (Open Collector)
MC5402	MTTL	CF	Quad 2-Input NOR Gate
MC5403	MTTL	CF	Quad 2-Input NAND Gate (Open Collector)
MC5404	MTTL	CF	Hex Inverter
MC5405	MTTL	CF	Hex Inverter
MC5406	MTTL	CF	Hex Inverter Buffer/Driver (Open Collector)
MC5407	MTTL	CF	Hex Buffer/Driver (Open Collector)
MC5408	MTTL	CF	Quad 2-Input AND Gate
MC5409	MTTL	CF	Quad 2-Input AND Gate (Open Collector)
MC5410	MTTL	CF	Triple 3-Input NAND Gate
MC5416	MTTL	CF	Hex Inverter Buffer/Driver (Open Collector)
MC5417	MTTL	CF	Hex Buffer/Driver
MC5420	MTTL	CF	Dual 4-Input NAND Gate
MC5426	MTTL	CF	Quad 2-Input Interface NAND Gate
MC5430	MTTL	CF	8-Input NAND Gate
MC5437	MTTL	CF	Quad 2-Input Positive NAND Buffer
MC5438	MTTL	CF	Quad 2-Input Positive NAND Buffer (Open Collector)
MC5440	MTTL	CF	Dual 4-Input NAND Buffer
MC5442	MTTL	CF	BCD-to-Decimal Decoder
MC5443	MTTL	CF	Excess Three-to-Decimal Decoder
MC5444	MTTL	CF	Excess Three Gray-to Decimal Decoder
MC5445	MTTL	CF	BCD to One-of-Ten Decoder/Driver
MC5446	MTTL	CF	BCD-to-Seven Segment Decoder/Driver
MC5447	MTTL	CF	BCD-to-Seven Segment Decoder/Driver
MC5448	MTTL	CF	BCD-to-Seven Segment Decoder/Driver
MC5449	MTTL	CF	BCD-to-Seven Segment Decoder/Driver
MC5450	MTTL	CF	Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate
MC5451	MTTL	CF	Dual 2-Wide 2-Input AND-OR-INVERT Gate
MC5453	MTTL	CF	Expandable 4-Wide 2-Input AND-OR-INVERT Gate
MC5454	MTTL	CF	4-Wide 2-Input AND-OR-INVERT Gate
MC5460	MTTL	CF	Dual 4-Input Expander for AND-OR-INVERT Gate
MC5470	MTTL	CF	J-K Flip-Flop
MC5472	MTTL	CF	J-K Flip-Flop
MC5473	MTTL	CF	Dual J-K Flip-Flop
MC5475	MTTL	CF	Quad Latch
MC5477	MTTL	CF	Quad Latch
MC5479	MTTL	CF	Dual Type D Flip-Flop
MC5480	MTTL	CF	Gated Full Adder
MC5483	MTTL	CF	4-Bit Binary Full Adder
MC5484	MTTL	CF	16-Bit Scratch Pad Memory Cell With Gated Inputs
MC5486	MTTL	CF	Quadruple 2-Input Exclusive OR Gate
MC5490	MTTL	CF	Decade Counter
MC5491A	MTTL	CF	8-Bit Shift Register
MC5492	MTTL	CF	Divide-by-Twelve Counter

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC5493	MTTL	CF	4-Bit Binary Counter
MC5494	MTTL	CF	4-Bit Shift Register
MC5495	MTTL	CF	4-Bit Shift Register
MC5496	MTTL	CF	5-Bit Shift Register
MC54H00	MTTL	CF	Quad 2-Input NAND Gate
MC54H01	MTTL	CF	Quad 2-Input NAND Gate (Open Collector)
MC54H02	MTTL	CF	Quad 2-Input NOR Gate
MC54H04	MTTL	CF	Hex Inverter
MC54H05	MTTL	CF	Hex Inverter
MC54H08	MTTL	CF	Quad 2-Input AND Gate
MC54H10	MTTL	CF	Triple 3-Input NAND Gate
MC54H11	MTTL	CF	Triple 3-Input AND Gate
MC54H12	MTTL	CF	Triple 3-Input NAND Gate (Open Collector)
MC54H20	MTTL	CF	Dual 4-Input NAND Gate
MC54H21	MTTL	CF	Dual 4-Input AND Gate
MC54H22	MTTL	CF	Dual 4-Input NAND Gate (Open Collector)
MC54H28	MTTL	CF	Dual 3-Input 3-Output AND Series Terminated Line Driver
MC54H29	MTTL	CF	Dual 3-Input 3-Output NAND Series Terminated Line Driver
MC54H30	MTTL	CF	8-Input NAND Gate
MC543h31	MTTL	CF	8-Input NAND Gate
MC54H32	MTTL	CF	Quad 2-Input OR Gate
MC54H36	MTTL	CF	Dual 4-Input NAND Power Gate
MC54H39	MTTL	CF	Dual 4-Input AND Power Gate
MC54H40	MTTL	CF	Dual 4-Input NAND Buffer Gate
MC54H50	MTTL	CF	Expandable Dual 2-Wide 2-Input AND-OR-Invert Gate
MC54H51	MTTL	CF	Dual 2-Wide 2-Input AND-OR-INVERT Gate
MC54H52	MTTL	CF	Expandable 4-Wide 2-2-2-3 Input AND-OR Gate
MC54H53	MTTL	CF	Expandable 4-Wide 2-2-2-3 Input AND-OR-INVERT Gate
MC54H54	MTTL	CF	4-Wide 2-2-2-3 Input AND-OR-INVERT Gate
MC54H55	MTTL	CF	Expandable 2-Wide 4-Input AND-OR-INVERT Gate
MC54H60	MTTL	CF	Dual 4-Input Expander for AND-OR-INVERT Gates
MC54H61	MTTL	CF	Triple 3-Input Expander For AND-OR Gates
MC54H62	MTTL	CF	4-Wide 3-2-2-3 Input Expander For AND-OR-INVERT Gates
MC54H71	MTTL	CF	OR Input J-K Flip-Flop
MC54H72	MTTL	CF	AND Input J-K Flip-Flop
MC54H73	MTTL	CF	Dual J-K Flip-Flop
MC54H74A	MTTL	CF	Edge-Triggered Dual Type D Flip-Flop
MC54H79	MTTL	CF	Dual Type D Flip-Flop
MC54H86	MTTL	CF	Quad 2-Input Exclusive OR Gate
MC54H89	MTTL	CF	Quad 2-Input Exclusive NOR Gate
MC54H115	MTTL	CF	AND J-K Flip-Flop
MC54H116	MTTL	CF	AND Input J-K Flip-Flop
MC54H117	MTTL	CF	AND Input JJ-KK Flip-Flop
MC54H118	MTTL	CF	Double-Edge-Triggered Master-Slave Type D Flip-Flop
MC54H119	MTTL	CF	Dual J-K Flip-Flop
MC54H120	MTTL	CF	Dual J-K Flip-Flop
MC5522	Linear	DS	Sense Amplifier
MC5523	Linear	DS	Sense Amplifier
MC5524	Linear	DS	Sense Amplifier
MC5525	Linear	DS	Sense Amplifier
MC5528	Linear	DB	Dual High-Speed Sense Amplifier with Preampl Test Points
MC5529	Linear	DB	Dual High-Speed Sense Amplifier with Preampl Test Points
MC5534	Linear	DB	Dual Sense Amplifier with Inverted Outputs
MC5535	Linear	DB	Dual Sense Amplifier with Inverted Outputs
MC5538	Linear	DB	Sense Amplifier with Preampl Test Points
MC5539	Linear	DB	Sense Amplifier with Preampl Test Points
MC7241	MTTL	CF	Quad Exclusive OR Gate
MC7242	MTTL	CF	Quad Exclusive NOR Gate (Open Collector)
MC7250	MTTL	CF	Binary to One-of-Eight Decoder
MC7251	MTTL	CF	Binary to One-of-Ten Decoder
MC7260	MTTL	CF	Arithmetic Logic Element
MC7261	MTTL	CF	Fast Carry Extender
MC7266	MTTL	CF	2-Input, 4-Bit Data Selector
MC7267	MTTL	CF	2-Input, 4-Bit Data Selector (Open Collector)
MC7270	MTTL	CF	4-Bit Shift Register
MC7271	MTTL	CF	4-Bit Shift Register
MC7280	MTTL	CF	Presettable Decade Counter
MC7281	MTTL	CF	Presettable Binary Counter
MC7400	MTTL	CF	Quad 2-Input NAND Gate
MC7401	MTTL	CF	Quad 2-Input NAND Gate (Open Collector)

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC7402	MTTL	CF	Quad 2-Input NOR Gate
MC7403	MTTL	CF	Quad 2-Input NAND Gate (Open Collector)
MC7404	MTTL	CF	Hex Inverter
MC7405	MTTL	CF	Hex Inverter
MC7406	MTTL	CF	Hex Inverter Buffer/Driver (Open Collector)
MC7407	MTTL	CF	Hex Buffer/Driver (Open Collector)
MC7408	MTTL	CF	Quad 2-Input AND Gate
MC7409	MTTL	CF	Quad 2-Input AND Gate (Open Collector)
MC7410	MTTL	CF	Triple 3-Input NAND Gate
MC7416	MTTL	CF	Hex Inverter Buffer/Driver (Open Collector)
MC7417	MTTL	CF	Hex Buffer/Driver
MC7420	MTTL	CF	Dual 4-Input NAND Gate
MC7426	MTTL	CF	Quad 2-Input Interface NAND Gate
MC7430	MTTL	CF	8-Input NAND Gate
MC7437	MTTL	CF	Quad 2-Input Positive NAND Buffer
MC7438	MTTL	CF	Quad 2-Input Positive NAND Buffer (Open Collector)
MC7440	MTTL	CF	Dual 4-Input NAND Buffer
MC7441A	MTTL	CF	BCD-to-Decimal Decoder and High-Level Driver
MC7442	MTTL	CF	BCD-to-Decimal Decoder
MC7443	MTTL	CF	Excess Three-to-Decimal Decoder
MC7444	MTTL	CF	Excess Three Gray-to Decimal Decoder
MC7445	MTTL	CF	BCD to One-of-Ten Decoder/Driver
MC7446	MTTL	CF	BCD-to-Seven Segment Decoder/Driver
MC7447	MTTL	CF	BCD-to-Seven Segment Decoder/Driver
MC7448	MTTL	CF	BCD-to-Seven Segment Decoder/Driver
MC7449	MTTL	CF	BCD-to-Seven Segment Decoder/Driver
MC7450	MTTL	CF	Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate
MC7451	MTTL	CF	Dual 2-Wide 2-Input AND-OR-INVERT Gate
MC7453	MTTL	CF	Expandable 4-Wide 2-Input AND-OR-INVERT Gate
MC7454	MTTL	CF	4-Wide 2-Input AND-OR-INVERT Gate
MC7460	MTTL	CF	Dual 4-Input Expander for AND-OR-INVERT Gate
MC7470	MTTL	CF	J-K Flip-Flop
MC7472	MTTL	CF	J-K Flip-Flop
MC7473	MTTL	CF	Dual J-K Flip-Flop
MC7475	MTTL	CF	Quad Latch
MC7476	MTTL	CF	Dual J-K Flip-Flop
MC7477	MTTL	CF	Quad Latch
MC7479	MTTL	CF	Dual Type D Flip-Flop
MC7480	MTTL	CF	Gated Full Adder
MC7483	MTTL	CF	4-Bit Binary Full Adder
MC7484	MTTL	CF	16-Bit Scratch Pad Memory Cell With Gated Inputs
MC7486	MTTL	CF	Quadruple 2-Input Exclusive OR Gate
MC7490	MTTL	CF	Decade Counter
MC7491A	MTTL	CF	8-Bit Shift Register
MC7492	MTTL	CF	Divide-by-Twelve Counter
MC7493	MTTL	CF	4-Bit Binary Counter
MC7494	MTTL	CF	4-Bit Shift Register
MC7495	MTTL	CF	4-Bit Shift Register
MC7496	MTTL	CF	5-Bit Shift Register
MC74H00	MTTL	CF	Quad 2-Input NAND Gate
MC74H01	MTTL	CF	Quad 2-Input NAND Gate (Open Collector)
MC74H02	MTTL	CF	Quad 2-Input NOR Gate
MC74H04	MTTL	CF	Hex Inverter
MC74H05	MTTL	CF	Hex Inverter
MC74H08	MTTL	CF	Quad 2-Input AND Gate
MC74H10	MTTL	CF	Triple 3-Input NAND Gate
MC74H11	MTTL	CF	Triple 3-Input AND Gate
MC74H12	MTTL	CF	Triple 3-Input NAND Gate (Open Collector)
MC74H20	MTTL	CF	Dual 4-Input NAND Gate
MC74H21	MTTL	CF	Dual 4-Input AND Gate
MC74H22	MTTL	CF	Dual 4-Input NAND Gate (Open Collector)
MC74H28	MTTL	CF	Dual 3-Input 3-Output AND Series Terminated Line Driver
MC74H29	MTTL	CF	Dual 3-Input 3-Output NAND Series Terminated Line Driver
MC74H30	MTTL	CF	8-Input NAND Gate
MC74H31	MTTL	CF	8-Input NAND Gate
MC74H32	MTTL	CF	Quad 2-Input OR Gate
MC74H36	MTTL	CF	Dual 4-Input NAND Power Gate
MC74H39	MTTL	CF	Dual 4-Input AND Power Gate
MC74H40	MTTL	CF	Dual 4-Input NAND Buffer Gate
MC74H50	MTTL	CF	Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC74H51	MTTL	CF	Dual 2-Wide 2-Input AND-OR-INVERT Gate
MC74H52	MTTL	CF	Expandable 4-Wide 2-2-2-3 Input AND-OR Gate
MC74H53	MTTL	CF	Expandable 4-Wide 2-2-2-3 Input AND-OR-INVERT Gate
MC74H54	MTTL	CF	4-Wide 2-2-2-3 Input AND-OR-INVERT Gate
MC74H55	MTTL	CF	Expandable 2-Wide 4-Input AND-OR-INVERT Gate
MC74H60	MTTL	CF	Dual 4-Input Expander for AND-OR-INVERT Gates
MC74H61	MTTL	CF	Triple 3-Input Expander For AND-OR Gates
MC74H62	MTTL	CF	4-Wide 3-2-2-3 Input Expander For AND-OR-INVERT Gates
MC74H71	MTTL	CF	OR Input J-K Flip-Flop
MC74H72	MTTL	CF	AND Input J-K Flip-Flop
MC74H73	MTTL	CF	Dual J-K Flip-Flop
MC74H74A	MTTL	CF	Edge-Triggered Dual Type D Flip-Flop
MC74H79	MTTL	CF	Dual Type D Flip-Flop
MC74H86	MTTL	CF	Quad 2-Input Exclusive OR Gate
MC74H89	MTTL	CF	Quad 2-Input Exclusive NOR Gate
MC74H115	MTTL	CF	AND J-K Flip-Flop
MC74H116	MTTL	CF	AND Input J-K Flip-Flop
MC74H117	MTTL	CF	AND Input JJ-KK Flip-Flop
MC74H118	MTTL	CF	Double-Edge-Triggered Master-Slave Type D Flip-Flop
MC74H119	MTTL	CF	Dual J-K Flip-Flop
MC74H120	MTTL	CF	Dual J-K Flip-Flop
MC7520	Linear	DB	Dual Sense Amplifier
MC7521	Linear	DB	Dual Sense Amplifier
MC7522	Linear	DB	Dual Sense Amplifier
MC7523	Linear	DB	Dual Sense Amplifier
MC7524	Linear	DB	Dual Sense Amplifier
MC7525	Linear	DB	Dual Sense Amplifier
MC7528	Linear	DB	Dual High-Speed Sense Amplifier with Preampl Test Points
MC7529	Linear	DB	Dual High-Speed Sense Amplifier with Preampl Test Points
MC7534	Linear	DB	Dual Sense Amplifier with Inverted Outputs
MC7535	Linear	DB	Dual Sense Amplifier with Inverted Outputs
MC7538	Linear	DB	Sense Amplifier with Preampl Test Points
MC7539	Linear	DB	Sense Amplifier with Preampl Test Points
MC7705C	Linear	DB	Positive Voltage Regulator
MC7706C	Linear	DB	Positive Voltage Regulator
MC7708C	Linear	DB	Positive Voltage Regulator
MC7712C	Linear	DB	Positive Voltage Regulator
MC7715C	Linear	DB	Positive Voltage Regulator
MC7718C	Linear	DB	Positive Voltage Regulator
MC7720C	Linear	DB	Positive Voltage Regulator
MC7724C	Linear	DB	Positive Voltage Regulator
MC7805C	Linear	DB	Positive Voltage Regulator
MC7806C	Linear	DB	Positive Voltage Regulator
MC7808C	Linear	DB	Positive Voltage Regulator
MC7812C	Linear	DB	Positive Voltage Regulator
MC7815C	Linear	DB	Positive Voltage Regulator
MC7818C	Linear	DB	Positive Voltage Regulator
MC7824C	Linear	DB	Positive Voltage Regulator
MC78M05	Linear	DS	Positive Voltage Regulator
MC78M06	Linear	DS	Positive Voltage Regulator
MC78M08	Linear	DS	Positive Voltage Regulator
MC78M12	Linear	DS	Positive Voltage Regulator
MC78M15	Linear	DS	Positive Voltage Regulator
MC78M18	Linear	DS	Positive Voltage Regulator
MC78M20	Linear	DS	Positive Voltage Regulator
MC78M24	Linear	DS	Positive Voltage Regulator
MC7902C	Linear	DB	Negative Voltage Regulator
MC7905C	Linear	DB	Negative Voltage Regulator
MC7905.2C	Linear	DB	Negative Voltage Regulator
MC7906C	Linear	DB	Negative Voltage Regulator
MC7908C	Linear	DB	Negative Voltage Regulator
MC7912C	Linear	DB	Negative Voltage Regulator
MC7915C	Linear	DB	Negative Voltage Regulator
MC7918C	Linear	DB	Negative Voltage Regulator
MC7924C	Linear	DB	Negative Voltage Regulator
MC8241	MTTL	CF	Quad Exclusive OR Gate
MC8242	MTTL	CF	Quad Exclusive NOR Gate (Open Collector)
MC8250	MTTL	CF	Binary to One-of-Eight Decoder
MC8251	MTTL	CF	Binary to One-of-Ten Decoder
MC8260	MTTL	CF	Arithmetic Logic Element

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC8261	MTTL	CF	Fast Carry Extender
MC8266	MTTL	CF	2-Input, 4-Bit Data Selector
MC8267	MTTL	CF	2-Input, 4-Bit Data Selector (Open Collector)
MC8270	MTTL	CF	4-Bit Shift Register
MC8271	MTTL	CF	4-Bit Shift Register
MC8280	MTTL	CF	Presettable Decade Counter
MC8281	MTTL	CF	Presettable Binary Counter
MC8300	MTTL	CF	Universal 4-Bit Shift Register
MC8301	MTTL	CF	BCD-to-Decimal Decoder
MC8304	MTTL	CF	Dual Full Adder
MC8306	MTTL	CF	Presettable Decade Up/Down Counter
MC8307	MTTL	CF	BCD-to-Seven Segment Decoder
MC8308	MTTL	CF	Dual 4-Bit Latch
MC8309	MTTL	CF	Dual 4-Channel Data Selector
MC8310	MTTL	CF	Presettable Decade Counter
MC8311	MTTL	CF	One of 16 Decoder
MC8312	MTTL	CF	8-Channel Data Selector
MC8314	MTTL	CF	Quad Latch
MC8316	MTTL	CF	Presettable 4-Bit Binary Counter
MC8318	MTTL	CF	8-Input Priority Encoder
MC8322	MTTL	CF	Quad 2-Input Data Selector/Multiplexer
MC8324	MTTL	CF	5-Bit Comparator
MC8328	MTTL	CF	Dual 8-Bit Shift Register
MC8375	MTTL	CF	Quad Latch
MC8377	MTTL	CF	Quad Latch
MC8383	MTTL	CF	4-Bit Binary Full Adder
MC8500P	LSI	DS	CRCC Generator
MC8501P	LSI	DS	Error Pattern Register
MC8502P	LSI	DS	LRCC/Data Register
MC8503P	LSI	DS	Universal Polynominal Generator
MC8520L	LSI	DS	Deskew/Queue Register
MC8601	MTTL	CF	Retriggerable Monostable Multivibrator
MC8602	MTTL	CF	Dual Retriggerable Resettable Monostable Multivibrator
MC8603	MTTL	CF	Monostable Multivibrator
MC8T13	Linear	DS	Dual Line Driver
MC8T14	Linear	DS	Triple Line Receiver
MC8T23	Linear	DS	Dual Line Driver
MC8T24	Linear	DS	Triple Line Receiver
MC9300	MTTL	CF	Universal 4-Bit Shift Register
MC9301	MTTL	CF	BCD-to-Decimal Decoder
MC9304	MTTL	CF	Dual Full Adder
MC9306	MTTL	CF	Presettable Decade Up/Down Counter
MC9307	MTTL	CF	BCD-to-Seven Segment Decoder
MC9308	MTTL	CF	Dual 4-Bit Latch
MC9309	MTTL	CF	Dual 4-Channel Data Selector
MC9310	MTTL	CF	Presettable Decade Counter
MC9311	MTTL	CF	One of 16 Decoder
MC9312	MTTL	CF	8-Channel Data Selector
MC9314	MTTL	CF	Quad Latch
MC9316	MTTL	CF	Presettable 4-Bit Binary Counter
MC9318	MTTL	CF	8-Input Priority Encoder
MC9322	MTTL	CF	Quad 2-Input Data Selector/Multiplexer
MC9324	MTTL	CF	5-Bit Comparator
MC9328	MTTL	CF	Dual 8-Bit Shift Register
MC9375	MTTL	CF	Quad Latch
MC9377	MTTL	CF	Quad Latch
MC9383	MTTL	CF	4-Bit Binary Full Adder
MC9601	MTTL	CF	Retriggerable Monostable Multivibrator
MC9602	MTTL	CF	Dual Retriggerable Resettable Monostable Multivibrator
MC9603	MTTL	CF	Monostable Multivibrator
MC9701P	MRTL	DS	Dual 4-Channel Data Selector
MC9702P	MRTL	DS	Dual J-K Flip-Flop
MC9704P	MRTL	DS	4-Bit Parallel Full Adder
MC9707P	MRTL	DS	Dual 4-Channel Data Distributor
MC9709P	MRTL	DS	Quad Schmitt Trigger
MC9713P	MRTL	DS	Quad 2-Input AND Gate
MC9714P	MRTL	DS	Quad 2-Input NAND Gate
MC9715P	MRTL	DS	Quad 2-Input OR Gate
MC9718P	mW MRTL	DS	Hex Inverter
MC9719F	MRTL	CF	Hex Expander

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC9719P,AP	MRTL	DS	Hex Expander
MC9720P	mW MRTL	DS	Hex Expander
MC9721F	mW MRTL	CF	Quad 2-Input Expander
MC9721P	mW MRTL	DS	Quad 2-Input Expander
MC9722P	mW MRTL	DS	Dual J-K Flip-Flop
MC9723P	mW MRTL	DS	Quad 2-Input AND Gate
MC9724P	mW MRTL	DS	Quad 2-Input NAND Gate
MC9725P	mW MRTL	DS	Quad 2-Input OR Gate
MC9801P	MRTL	DS	Dual 4-Channel Data Selector
MC9802P	MRTL	DS	Dual J-K Flip-Flop
MC9804P	MRTL	DS	4-Bit Parallel Full Adder
MC9807P	MRTL	DS	Dual 4-Channel Data Distributor
MC9809P	MRTL	DS	Quad Schmitt Trigger
MC9813P	MRTL	DS	Quad 2-Input AND Gate
MC9814P	MRTL	DS	Quad 2-Input NAND Gate
MC9815P	MRTL	DS	Quad 2-Input OR Gate
MC9818P	mW MRTL	DS	Hex Inverter
MC9819F	MRTL	CF	Hex Expander
MC9819P,AP	MRTL	DS	Hex Expander
MC9820P	mW MRTL	DS	Hex Expander
MC9821F	mW MRTL	CF	Quad 2-Input Expander
MC9821P	mW MRTL	DS	Quad 2-Input Expander
MC9822P	mW MRTL	DS	Dual J-K Flip-Flop
MC9823P	mW MRTL	DS	Quad 2-Input AND Gate
MC9824P	mW MRTL	DS	Quad 2-Input NAND Gate
MC9825P	mW MRTL	DS	Quad 2-Input OR Gate
MC9919F	MRTL	CF	Hex Expander
MC9921F	mW MRTL	CF	Quad 2-Input Expander
MC10100	MECL	V4	Quad 2-Input NOR Gate With Strobe
MC10101	MECL	V4	Quad OR/NOR Gate
MC10102	MECL	V4	Quad 2-Input NOR Gate
MC10103	MECL	V4	Quad 2-Input OR Gate
MC10104	MECL	V4	Quad 2-Input AND Gate
MC10105	MECL	V4	Triple 2-3-2-Input OR/NOR Gate
MC10106	MECL	V4	Triple 4-3-3-Input NOR Gate
MC10107	MECL	V4	Triple 2-Input Exclusive OR/Exclusive NOR
MC10109	MECL	V4	Dual 4-5-Input OR/NOR Gate
MC10110	MECL	V4	Dual 3-Input 3-Output OR Gate
MC10111	MECL	V4	Dual 3-Input 3-Output NOR Gate
MC10113	MECL	V4	Quad Exclusive OR Gate
MC10114	MECL	V4	Triple Line Receiver
MC10115	MECL	V4	Quad Line Receiver
MC10116	MECL	V4	Triple Line Receiver
MC10117	MECL	V4	Dual 2-Wide 2-3-Input OR-AND/OR-AND-INVERT Gate
MC10118	MECL	V4	Dual 2-Wide 3-Input OR-AND Gate
MC10119	MECL	V4	4-Wide 4-3-3-3-Input OR-AND Gate
MC10121	MECL	V4	4-Wide OR-AND/OR-AND-INVERT Gate
MC10123	MECL	V4	Triple 4-3-3-Input Bus Driver
MC10124	MECL	V4	Quad MTTL to MECL Translator
MC10125	MECL	V4	Quad MECL to MTTL Translator
MC10127	MECL	V4	Dual MECL to MOS Translator
MC10128	MECL	V4	Bus Driver
MC10129	MECL	V4	Quad Bus Receiver
MC10130	MECL	V4	Dual Latch
MC10131	MECL	V4	Dual Type D Master-Slave Flip-Flop
MC10132	MECL	V4	Dual Multiplexer With Latch and Common Reset
MC10133	MECL	V4	Quad Latch
MC10134	MECL	V4	Multiplexer with Latch
MC10135	MECL	V4	Dual J-K Master-Slave Flip Flop
MC10136	MECL	V4	Universal Hexadecimal Counter
MC10137	MECL	V4	Universal Decade Counter
MC10138	MECL	V4	Bi-Quinary Counter
MC10141	MECL	V4	Four-Bit Universal Shift Register
MC10153	MECL	V4	Quad Latch
MC10160	MECL	V4	12-Bit Parity Generator-Checker
MC10161	MECL	V4	Binary to 1-8 Decoder (Low)
MC10162	MECL	V4	Binary to 1-8 Decoder (High)
MC10163	MECL	V4	Error Detection-Correction Circuit
MC10164	MECL	V4	8-Line Multiplexer
MC10165	MECL	V4	8-Input Priority Encoder

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC10166	MECL	V4	5-Bit Magnitude Comparator
MC10168	MECL	V4	Quad Latch
MC10171	MECL	V4	Dual Binary To 1-4 Decoder (Low)
MC10174	MECL	V4	Dual 4 To 1 Multiplexer
MC10175	MECL	V4	Quint Latch
MC10176	MECL	V4	Hex "D" Master-Slave Flip-Flop
MC10177	MECL	V4	Triple MECL to NMOS Translator
MC10178	MECL	V4	Binary Counter
MC10179	MECL	V4	Look-Ahead Carry Block
MC10180	MECL	V4	Dual High Speed Adder/Subtractor
MC10181	MECL	V4	4-Bit Arithmetic Logic Unit/Function Generator
MC10182	MECL	V4	2-Bit Arithmetic Logic Unit/Function Generator
MC10193	MECL	V4	Error Detection-Correction Circuit
MC10195	MECL	V4	Hex Inverter/Buffer
MC10197	MECL	V4	Hex AND Gate
MC10210	MECL	V4	High Speed Dual 3-Input 3-Output OR Gate
MC10211	MECL	V4	High Speed Dual 3-Input 3-Output NOR Gate
MC10212	MECL	V4	High Speed Dual 3-Input 3-Output OR/NOR Gate
MC10216	MECL	V4	High Speed Triple Line Receiver
MC10231	MECL	V4	High Speed Dual Type D Master-Slave Flip-Flop
MC10287	MECL	V4	High Speed 2x1 Bit Array Multiplexer Block
MC10501	MECL	V4	Quad OR/NOR Gate
MC10502	MECL	V4	Quad 2-Input NOR Gate
MC10504	MECL	V4	Quad 2-Input AND Gate
MC10505	MECL	V4	Triple 2-3-2-Input OR/NOR Gate
MC10506	MECL	V4	Triple 4-3-3-Input NOR Gate
MC10507	MECL	V4	Triple 2-Input Exclusive OR/Exclusive NOR
MC10509	MECL	V4	Dual 4-5-Input OR/NOR Gate
MC10514	MECL	V4	Triple Line Receiver
MC10515	MECL	V4	Quad Line Receiver
MC10516	MECL	V4	Triple Line Receiver
MC10517	MECL	V4	Dual 2-Wide 2-3-Input OR-AND/OR-AND-INVERT Gate
MC10518	MECL	V4	Dual 2-Wide 3-Input OR-AND Gate
MC10519	MECL	V4	4-Wide 4-3-3-3-Input OR-AND Gate
MC10521	MECL	V4	4-Wide OR-AND/OR-AND-INVERT Gate
MC10524	MECL	V4	Quad MTTL to MECL Translator
MC10525	MECL	V4	Quad MECL to MTTL Translator
MC10530	MECL	V4	Dual Latch
MC10531	MECL	V4	Dual Type D Master-Slave Flip-Flop
MC10533	MECL	V4	Quad Latch
MC10535	MECL	V4	Dual J-K Master-Slave Flip Flop
MC10536	MECL	V4	Universal Hexadecimal Counter
MC10537	MECL	V4	Universal Decade Counter
MC10541	MECL	V4	Four-Bit Universal Shift Register
MC10560	MECL	V4	12-Bit Parity Generator-Checker
MC10561	MECL	V4	Binary to 1-8 Decoder (Low)
MC10562	MECL	V4	Binary to 1-8 Decoder (High)
MC10564	MECL	V4	8-Line Multiplexer
MC10574	MECL	V4	Dual 4 To 1 Multiplexer
MC10575	MECL	V4	Quint Latch
MC10580	MECL	V4	Dual High Speed Adder/Subtractor
MC10581	MECL	V4	4-Bit Arithmetic Logic Unit/Function Generator
MC10616	MECL	V4	High Speed Triple Line Receiver
MC10631	MECL	V4	High Speed Dual Type D Master-Slave Flip-Flop
MC12000	PLL	V4	Digital Mixer/Translator
MC12012	PLL	V4	Two-Modulus Prescaler
MC12014	PLL	DS	Counter Control Logic
MC12040	PLL	V4	Phase-Frequency Detector
MC12060	PLL	DS	Crystal Oscillator
MC12061	PLL	DS	Crystal Oscillator
MC12560	PLL	DS	Crystal Oscillator
MC12561	PLL	DS	Crystal Oscillator
MC13120	Linear	DB	FM IF Amplifier
MC14000	McMOS	DB	Dual 3-Input NOR Gate/Inverter
MC14001	McMOS	DB	Quad 2-Input NOR Gate
MC14002	McMOS	DB	Dual 4-Input NOR Gate
MC14006	McMOS	DB	18-Bit Static Shift Register
MC14007	McMOS	DB	Dual Complementary Pair Plus Inverter
MC14008	McMOS	DB	4-Bit Full Adder
MC14009	McMOS	DB	Hex Inverter/Buffer

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC14010	McMOS	DB	Hex Noninverting Buffer
MC14011	McMOS	DB	Quad 2-Input NAND Gate
MC14012	McMOS	DB	Dual 4-Input NAND Gate
MC14013	McMOS	DB	Dual Type D Flip-Flop
MC14014	McMOS	DS	8-Bit Static Shift Register
MC14015	McMOS	DB	Dual 4-Bit Static Shift Register
MC14016	McMOS	DB	Quad Analog Switch/Quad Multiplexer
MC14017	McMOS	DB	Decade Counter/Divider
MC14020	McMOS	DB	14-Bit Binary Counter
MC14021	McMOS	DB	8-Bit Static Shift Register
MC14022	McMOS	DB	Octal Counter/Divider
MC14023	McMOS	DB	Triple 3-Input NAND Gate
MC14024	McMOS	DB	Seven-Stage Ripple Counter
MC14025	McMOS	DB	Triple 3-Input NOR Gate
MC14027	McMOS	DB	Dual J-K Flip-Flop
MC14028	McMOS	DB	BCD-To-Decimal Decoder/Binary-To-Octal Decoder
MC14032	McMOS	DB	Triple Serial Adder (Positive Logic)
MC14034	McMOS	DB	8-Bit Universal Bus Register
MC14035	McMOS	DB	4-Bit Parallel-In/Parallel-Out Shift Register
MC14038	McMOS	DB	Triple Serial Adder (Negative Logic)
MC14040	McMOS	DB	12-Bit Binary Counter
MC14042	McMOS	DB	Quad Latch
MC14049	McMOS	DB	Hex Inverter/Buffer
MC14050	McMOS	DB	Hex Buffer
MC14501	McMOS	DB	Triple Gate (Dual 4-Input NAND and 2-Input NOR/OR)
MC14502	McMOS	DB	Strobed Hex Inverter/Buffer
MC14506	McMOS	DB	Dual Expandable AND-OR-INVERT Gate
MC14507	McMOS	DB	Quad Exclusive OR Gate
MC14508	McMOS	DB	Dual 4-Bit Latch
MC14510	McMOS	DB	BCD Up/Down Counter
MC14511	McMOS	DB	BCD-To-Seven Segment Latch/Decoder/Driver
MC14512	McMOS	DB	8-Channel Data Selector
MC14514	McMOS	DB	4-Bit Latch/4 to 16 Line Decoder (High)
MC14515	McMOS	DB	4-Bit Latch/4 to 16 Line Decoder (Low)
MC14516	McMOS	DB	Binary Up/Down Counter
MC14517	McMOS	DB	Dual 64-Bit Static Shift Register
MC14518	McMOS	DB	Dual BCD Up Counter
MC14519	McMOS	DB	4-Bit AND/OR Selector
MC14520	McMOS	DB	Dual Binary Up Counter
MC14521	McMOS	DB	24-State Frequency Divider
MC14522	McMOS	DB	Programmable Divide-By-N-4-Bit Counter (BCD)
MC14526	McMOS	DB	Programmable Divide-By-N-4-Bit Counter (Binary)
MC14527	McMOS	DB	BCD Rate Multiplier
MC14528	McMOS	DB	Dual Retriggerable/Resettable Monostable Multivibrator
MC14529	McMOS	DB	Dual 4-Channel Analog Data Selector
MC14530	McMOS	DB	Dual 5-Input Majority Logic Gate
MC14531	McMOS	DB	12-Bit Parity Tree
MC14532	McMOS	DB	8-Bit Priority Encoder
MC14534	McMOS	DS	Real Time 5-Decade Counter
MC14536	McMOS	DS	Programmable Timer
MC14539	McMOS	DB	Dual 4-Channel Data Selector/Multiplexer
MC14543	McMOS	DB	BCD-To-Seven Segment Latch/Decoder/Driver
MC14549	McMOS	DB	Successive Approximation Register
MC14553	McMOS	DS	Three-Digit BCD Counter
MC14554	McMOS	DB	2 x 2-Bit Parallel Binary Multiplier
MC14555	McMOS	DB	Dual Binary to 1 of 4 Decoder/Demultiplexer
MC14556	McMOS	DB	Dual Binary to 1 of 4 Decoder/Demultiplexer (Inverting)
MC14559	McMOS	DB	Successive Approximation Register
MC14562	McMOS	DS	128-Bit Static Shift Register
MC14566	McMOS	DS	Industrial Time Base Generator
MC14570	McMOS	DB	Quad 2-Input OR Gate
MC14571	McMOS	DS	Quad 2-Input AND Gate
MC14572	McMOS	DS	Hex Gate
MC14580	McMOS	DS	4 x 4 Multiport Register
MC14581	McMOS	DB	4-Bit Arithmetic Logic Unit
MC14582	McMOS	DB	Look-Ahead Carry Block
MC14583	McMOS	DB	Dual Schmitt Trigger
MC14585	McMOS	DB	4-Bit Magnitude Comparator
MC15482	MTTL	CF	2-Bit Full Adder
MC17482	MTTL	CF	2-Bit Full Adder

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC19172	MECL	V4	Dual Binary To 1-4 Decoder (High)
MC19173	MECL	V4	Quad 2-Input Multiplexer/Latch
MC25482	MTTL	CF	2-Bit Full Adder
MC27482	MTTL	CF	2-Bit Full Adder
MC54100	MTTL	CF	Dual 4-Bit Latch
MC54107	MTTL	CF	Dual J-K Flip-Flop
MC54121	MTTL	CF	Monostable Multivibrator
MC54145	MTTL	CF	BCD to One-of-Ten Decoder/Driver
MC54150	MTTL	CF	16-Channel Data Selector
MC54151	MTTL	CF	8-Channel Data Selector
MC54152	MTTL	CF	8-Channel Data Selector/Multiplexer
MC54153	MTTL	CF	Dual 4-Channel Data Selector/Multiplexer
MC54155	MTTL	CF	Dual 2-to-4 Line Decoder/1-to-4 Line Demultiplexer
MC54156	MTTL	CF	Dual 2-to-4 Line Decoder/1-to-4 Line Demultiplexer
MC54157	MTTL	CF	Quad 2-Input Data Selector/Multiplexer
MC54164A	MTTL	CF	8-Bit Parallel Out Serial Shift Register
MC54165	MTTL	CF	Parallel-Load 8-Bit Shift Register
MC54176	MTTL	CF	Presettable Decade and Binary Counters/Latches
MC54177	MTTL	CF	Presettable Decade and Binary Counters/Latches
MC54180	MTTL	CF	8-Bit Odd/Even Generator/Checker
MC54181	MTTL	CF	4-Bit Arithmetic Logic Unit/Function Generator
MC54182	MTTL	CF	Look-Ahead Carry Generator
MC54192	MTTL	CF	Presettable Decade Up/Down Counter
MC54193	MTTL	CF	Presettable 4-Bit Binary Up/Down Counter
MC54195	MTTL	CF	4-Bit Parallel-Access Shift Register
MC54406	MTTL	CF	Binary to One-of-Eight Line Decoder
MC54408	MTTL	CF	8-Bit Parity Tree
MC54416	MTTL	CF	Programmable Modulo-N Decade Counter
MC54417	MTTL	CF	Programmable Modulo-N Decade Counter
MC54418	MTTL	CF	Programmable Modulo-N Hexadecimal Counter
MC54419	MTTL	CF	Programmable Modulo-N Hexadecimal Counter
MC54450	MTTL	CF	Counter Latch Decoder
MC54452	MTTL	CF	Dual Decade Counter
MC54453	MTTL	CF	Dual Hexadecimal Counter
MC54454	MTTL	CF	Dual Decade Up/Down Counter
MC54455	MTTL	CF	Dual Binary Up/Down Counter
MC54456	MTTL	CF	NBCD Adder
MC54460	MTTL	CF	Bus Transfer Switch
MC54468	MTTL	CF	Dual MOS-to-TTL Level Translator With Three-State Output
MC55107	Linear	DB	Dual Line Receiver
MC55108	Linear	DB	Dual Line Receiver
MC55325	Linear	DB	Dual Memory Driver
MC74164A	MTTL	CF	8-Bit Parallel Out Serial Shift Register
MC74100	MTTL	CF	Dual 4-Bit Latch
MC74107	MTTL	CF	Dual J-K Flip-Flop
MC74121	MTTL	CF	Monostable Multivibrator
MC74145	MTTL	CF	BCD to One-of-Ten Decoder/Driver
MC74150	MTTL	CF	16-Channel Data Selector
MC74151	MTTL	CF	8-Channel Data Selector
MC74152	MTTL	CF	8-Channel Data Selector/Multiplexer
MC74153	MTTL	CF	Dual 4-Channel Data Selector/Multiplexer
MC74155	MTTL	CF	Dual 2-to-4 Line Decoder/1-to-4 Line Demultiplexer
MC74156	MTTL	CF	Dual 2-to-4 Line Decoder/1-to-4 Line Demultiplexer
MC74157	MTTL	CF	Quad 2-Input Data Selector/Multiplexer
MC74165	MTTL	CF	Parallel-Load 8-Bit Shift Register
MC74176	MTTL	CF	Presettable Decade and Binary Counters/Latches
MC74177	MTTL	CF	Presettable Decade and Binary Counters/Latches
MC74180	MTTL	CF	8-Bit Odd/Even Generator/Checker
MC74181	MTTL	CF	4-Bit Arithmetic Logic Unit/Function Generator
MC74182	MTTL	CF	Look-Ahead Carry Generator
MC74192	MTTL	CF	Presettable Decade Up/Down Counter
MC74195	MTTL	CF	4-Bit Parallel-Access Shift Register
MC74406	MTTL	CF	Binary to One-of-Eight Line Decoder
MC74408	MTTL	CF	8-Bit Parity Tree
MC74416	MTTL	CF	Programmable Modulo-N Decade Counter
MC74417	MTTL	CF	Programmable Modulo-N Decade Counter
MC74418	MTTL	CF	Programmable Modulo-N Hexadecimal Counter
MC74450	MTTL	CF	Counter Latch Decoder
MC74450	MTTL	CF	Programmable Modulo-N Hexadecimal Counter
MC74452	MTTL	CF	Dual Decade Counter

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MC74453	MTTL	CF	Dual Hexadecimal Counter
MC74454	MTTL	CF	Dual Decade Up/Down Counter
MC74455	MTTL	CF	Dual Binary Up/Down Counter
MC74456	MTTL	CF	NBCD Adder
MC74460	MTTL	CF	Bus Transfer Switch
MC74468	MTTL	CF	Dual MOS-to-TTL Level Translator With Three-State Output
MC74913	MTTL	CF	Presettable 4-Bit Binary Up/Down Counter
MC75107	Linear	DB	Dual Line Receiver
MC75108	Linear	DB	Dual Line Receiver
MC75109	Linear	DB	Dual Line Driver
MC75110	Linear	DB	Dual Line Driver
MC75140	Linear	DB	Dual Line Receiver
MC75325	Linear	DB	Dual Memory Driver
MC75450	Linear	DB	Dual Peripheral Driver, Positive AND
MC75451	Linear	DB	Dual Peripheral Driver, Positive AND
MC75452	Linear	DB	Dual Peripheral Driver, Positive NAND
MC75453	Linear	DB	Dual Peripheral Driver, Positive OR
MC75454	Linear	DB	Dual Peripheral Driver, Positive NOR
MC75461	Linear	DS	High Voltage Peripheral Driver
MC75462	Linear	DS	High Voltage Peripheral Driver
MC75463	Linear	DS	High Voltage Peripheral Driver
MC75464	Linear	DS	High Voltage Peripheral Driver
MC75491	Linear	DB	Quad Light-Emitting Diode (LED) Driver
MC75492	Linear	DB	Hex Light-Emitting Diode (LED) Driver
MC83151	MTTL	CF	8-Channel Data Selector
MC83152	MTTL	CF	8-Channel Data Selector/Multiplexer
MC83153	MTTL	CF	Dual 4-Channel Data Selector/Multiplexer
MC93151	MTTL	CF	8-Channel Data Selector
MC93152	MTTL	CF	8-Channel Data Selector/Multiplexer
MC93153	MTTL	CF	Dual 4-Channel Data Selector/Multiplexer
MCB1709	Linear	DB	Operational Amplifier (encapsulated Beam-Lead)
MCB1710	Linear	DB	Differential Comparator (encapsulated Beam-Lead)
MCB1723	Linear	DB	Voltage Regulator (encapsulated Beam-Lead)
MCB1741	Linear	DB	Operational Amplifier (encapsulated Beam-Lead)
MCB1748	Linear	DB	Operational Amplifier (encapsulated Beam-Lead)
MCBC1709	Linear	DB	Operational Amplifier (non-encapsulated Beam-Lead)
MCBC1710	Linear	DB	Differential Comparator (non-encapsulated Beam-Lead)
MCBC1723	Linear	DB	Voltage Regulator (non-encapsulated Beam-Lead)
MCBC1741	Linear	DB	Operational Amplifier (non-encapsulated Beam-Lead)
MCBC1748	Linear	DB	Operational Amplifier (non-encapsulated Beam-Lead)
MCBC5400	MTTL	CF	Quad 2-Input NAND Gate
MCBC5401	MTTL	CF	Quad 2-Input NAND Gate (Open Collector Output)
MCBC5402	MTTL	CF	Quad 2-Input NOR Gate
MCBC5404	MTTL	CF	Hex Inverter
MCBC5405	MTTL	CF	Hex Inverter (Open Collector)
MCBC5410	MTTL	CF	Triple 3-Input NAND Gate
MCBC5420	MTTL	CF	Dual 4-Input NAND Gate
MCBC5430	MTTL	CF	8-Input NAND Gate
MCBC5440	MTTL	CF	Dual 4-Input NAND Buffer
MCBC5450	MTTL	CF	Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate
MCBC5451	MTTL	CF	Dual 2-Wide 2-Input AND-OR-INVERT Gate
MCBC5453	MTTL	CF	Expandable 4-Wide 2-Input AND-OR-INVERT Gate
MCBC5454	MTTL	CF	Expandable 4-Wide 2-Input AND-OR-INVERT Gate
MCBC5460	MTTL	CF	Dual 4-Input Expander for AND-OR-INVERT Gate
MCBC5472	MTTL	CF	J-K Flip-Flop
MCBC5473	MTTL	CF	Dual J-K Flip-Flop
MCBC5479	MTTL	CF	Dual Type D Flip-Flop
MCC1436	Linear	DB	Operational Amplifier (Chip)
MCC1439	Linear	DB	Operational Amplifier (Chip)
MCC1458	Linear	DB	Dual Operational Amplifier (Chip)
MCC1463	Linear	DB	Negative Voltage Regulator (Chip)
MCC1469	Linear	DB	Positive Voltage Regulator (Chip)
MCC1495	Linear	DB	Four-Quadrant Multiplier (Chip)
MCC1536	Linear	DB	Operational Amplifier (Chip)
MCC1539	Linear	DB	Operational Amplifier (Chip)
MCC1558	Linear	DB	Dual Operational Amplifier (Chip)
MCC1563	Linear	DB	Negative Voltage Regulator (Chip)
MCC1569	Linear	DB	Positive Voltage Regulator (Chip)
MCC1595	Linear	DB	Four-Quadrant Multiplier (Chip)
MCC1709	Linear	DB	Operational Amplifier (Chip)

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MCC1709C	Linear	DB	Operational Amplifier (Chip)
MCC1710	Linear	DB	Differential Comparator (Chip)
MCC1710C	Linear	DB	Differential Comparator (Chip)
MCC1711	Linear	DB	Dual Differential Comparator (Chip)
MCC1711C	Linear	DB	Dual Differential Comparator (Chip)
MCC1723	Linear	DB	Positive Voltage Regulator (Chip)
MCC1723C	Linear	DB	Positive Voltage Regulator (Chip)
MCC1741	Linear	DB	Operational Amplifier (Chip)
MCC1741C	Linear	DB	Operational Amplifier (Chip)
MCC1748	Linear	DB	Operational Amplifier (Chip)
MCC1748C	Linear	DB	Operational Amplifier (Chip)
MCCF1458	Linear	DB	Dual Operational Amplifier (Flip-Chip)
MCCF1558	Linear	DB	Dual Operational Amplifier (Flip-Chip)
MCCF1709	Linear	DB	Operational Amplifier (Flip-Chip)
MCCF1709C	Linear	DB	Operational Amplifier (Flip-Chip)
MCCF1741	Linear	DB	Operational Amplifier (Flip-Chip)
MCCF1741C	Linear	DB	Operational Amplifier (Flip-Chip)
MCE930	MDTL	DS	Expandable Dual 4-Input NAND Gate
MCE932	MDTL	DS	Expandable Dual 4-Input Buffer
MCE933	MDTL	DS	Dual 4-Input Expander
MCE936	MDTL	DS	Hex Inverter
MCE944	MDTL	DS	Expandable Dual 4-Input NAND Power Gate
MCE945	MDTL	DS	Clocked Flip-Flop
MCE946	MDTL	DS	Quad 2-Input NAND Gate
MCE948	MDTL	DS	Clocked Flip-Flop
MCE962	MDTL	DS	Triple 3-Input NAND Gate
MCE54H00	MTTL	CF	Quad 2-Input NAND Gate
MCE54H01	MTTL	CF	Quad 2-Input NAND Gate (Open Collector Output)
MCE54H04	MTTL	CF	Hex Inverter
MCE54H10	MTTL	CF	Triple 3-Input NAND Gate
MCE54H20	MTTL	CF	Dual 4-Input NAND Gate
MCE54H31	MTTL	CF	11-Input NAND Gate
MCE54H40	MTTL	CF	Dual 4-Input NAND Power Gate
MCE54H51	MTTL	CF	Dual 2-Wide 2-Input AND-OR-INVERT Gate
MCE54H54A	MTTL	CF	4-Wide 2-Input AND-OR-INVERT Gate
MCE54H56	MTTL	CF	Dual 2-Wide 2-3-Input AND-OR-INVERT Gate
MCE54H57	MTTL	CF	4-Wide 3-3-2-3-Input AND-OR-INVERT Gate
MCE54H79	MTTL	CF	Dual Type D Flip-Flop
MCE54H146	MTTL	CF	Binary To One-Of-Eight Line Decoder
MCE7003	Network	DS	Seven-Diode Array
MCE7005	Network	DS	Diode-Resistor Network
MCE7006	Network	DS	Sixteen-Diode Array
MCE7007	Network	DS	Twelve-Resistor Network
MCE74H00	MTTL	CF	Quad 2-Input NAND Gate
MCE74H01	MTTL	CF	Quad 2-Input NAND Gate (Open Collector Output)
MCE74H04	MTTL	CF	Hex Inverter
MCE74H10	MTTL	CF	Triple 3-Input NAND Gate
MCE74H20	MTTL	CF	Dual 4-Input NAND Gate
MCE74H31	MTTL	CF	11-Input NAND Gate
MCE74H40	MTTL	CF	Dual 4-Input NAND Power Gate
MCE74H51	MTTL	CF	Dual 2-Wide 2-Input AND-OR-INVERT Gate
MCE74H54A	MTTL	CF	4-Wide 2-Input AND-OR-INVERT Gate
MCE74H56	MTTL	CF	Dual 2-Wide 2-3-Input AND-OR-INVERT Gate
MCE74H57	MTTL	CF	4-Wide 3-3-2-3-Input AND-OR-INVERT Gate
MCE74H79	MTTL	CF	Dual Type D Flip-Flop
MCE74H146	MTTL	CF	Binary To One-Of-Eight Line Decoder
MCE54103	MTTL	CF	Dual J-K Flip-Flop
MCE74103	MTTL	CF	Dual J-K Flip-Flop
MCM4064	MTTL	CF	64-Bit Random Access Memory
MCM4067	MTTL	CF	Binary to BCD Number Converter
MCM4068	MTTL	CF	Binary to BCD Number Converter
MCM4069	MTTL	CF	Hollerith to ASCII Converter
MCM4070	MTTL	CF	Hollerith to ASCII Converter
MCM4364	MTTL	CF	64-Bit Random Access Memory
MCM6560	MOS	DS	8192-Bit Binary Addressable Read Only Memory
MCM6561	MOS	DS	8192-Bit Binary Addressable Read Only Memory
MCM6570	MOS	DS	8192-Bit Read Only Memory Character Generator
MCM6571	MOS	DS	8192-Bit Read Only Memory Character Generator
MCM6572	MOS	DS	8192-Bit Read Only Memory Character Generator
MCM6580	MOS	DS	8192-Bit Read Only Memory Character Generator

TYPE NO.	FAMILY	REFERENCE CODES: DB-Data Book DS-Data Sheet V4-Volume 4 CF-Consult Factory	FUNCTION
MCM6581	MOS	DS	8192-Bit Read Only Memory Character Generator
MCM6583	MOS	DS	8192-Bit Read Only Memory Character Generator
MCM6605L	MOS	DS	4096-Bit Dynamic Random Access Memory
MCM6605L-1	MOS	DS	4096-Bit Dynamic Random Access Memory
MCM7001L	MOS	DS	1024-Bit Static Random Access Memory
MCM7001L-1	MOS	DS	1024-Bit Static Random Access Memory
MCM10140	MECL	V4	64-Bit Random Access Memory (90 Ohm)
MCM10142	MECL	V4	64-Bit Random Access Memory (50 Ohm)
MCM10143	MECL	V4	8 x 2 Multiport Register File (RAM)
MCM10144	MECL	V4	256-Bit Random Access Memory
MCM10145	MECL	V4	64-Bit Register File (RAM)
MCM10147	MECL	V4	128-Bit Random Access Memory
MCM10148	MECL	V4	64-Bit Random Access Memory (50 Ohm)
MCM10150	MECL	V4	1024-Bit Programmable Read Only Memory
MCM14505	McMOS	DB	64-Bit Static Random Access Memory
MCM14524	McMOS	DB	1024-Bit Read Only Memory
MCM14537	McMOS	DB	256-Bit Static Random Access Memory
MFC4000B	Linear	DB	1/4-Watt Audio Amplifier
MFC4010A	Linear	DB	Wideband Amplifier
MFC4040	Linear	DB	Single Toggle Flip-Flop
MFC4050	Linear	DB	Audio Driver
MFC4060A	Linear	DB	Voltage Regulator
MFC4062A	Linear	DB	Voltage Regulator
MFC4063A	Linear	DB	Voltage Regulator
MFC4064A	Linear	DB	Voltage Regulator
MFC6010	Linear	DB	FM IF Amplifier
MFC6020	Linear	DB	Dual Toggle Flip-Flop
MFC6030A	Linear	DB	Voltage Regulator
MFC6032A	Linear	DB	Voltage Regulator
MFC6033A	Linear	DB	Voltage Regulator
MFC6034A	Linear	DB	Voltage Regulator
MFC6040	Linear	DB	Electronic Attenuator
MFC6050	Linear	DB	Dual Toggle Flip-Flop with Reset
MFC6070	Linear	DB	Audio Power Amplifier
MFC8020A	Linear	DB	Class B Audio Driver
MFC8021A	Linear	DB	Class B Audio Driver
MFC8022A	Linear	DB	Class B Audio Driver
MFC8030	Linear	DB	Differential Cascode Amplifier
MFC8040	Linear	DB	Audio Preamplifier
MFC8070	Linear	DB	Zero Voltage Switch
MLM101A	Linear	DB	Operational Amplifier
MLM104	Linear	DB	Negative Voltage Regulator
MLM105	Linear	DB	Positive Voltage Regulator
MLM107	Linear	DB	Operational Amplifier
MLM109	Linear	DB	Positive Voltage Regulator
MLM110	Linear	DB	Operational Amplifier
MLM111	Linear	DB	Voltage Comparator
MLM201A	Linear	DB	Operational Amplifier
MLM204	Linear	DB	Negative Voltage Regulator
MLM205	Linear	DB	Positive Voltage Regulator
MLM207	Linear	DB	Operational Amplifier
MLM209	Linear	DB	Positive Voltage Regulator
MLM210	Linear	DB	Operational Amplifier
MLM211	Linear	DB	Voltage Comparator
MLM301A	Linear	DB	Operational Amplifier
MLM304	Linear	DB	Negative Voltage Regulator
MLM305	Linear	DB	Positive Voltage Regulator
MLM307	Linear	DB	Operational Amplifier
MLM309	Linear	DB	Positive Voltage Regulator
MLM310	Linear	DB	Operational Amplifier
MLM311	Linear	DB	Voltage Comparator
MMH0026	Linear	DB	Dual MOS Clock Driver
MMH0026C	Linear	DB	Dual MOS Clock Driver

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- TRANSISTORS
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  - Milliwatt
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Devices for Military Applications

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DEVICES FOR MILITARY APPLICATIONS

1N. . .Device Numbers
ASSEMBLIES
DIODES
Reference
Zener
RECTIFIERS

The following tables list devices that appear in QPL-19500 (Qualified Products List) as of 15 August 1974 and are available in the JAN, JANTX, and JANTXV versions as specified. Check with your local Motorola sales office or franchised distributor for current qualification status and availability.

SILICON ZENER DIODES ±5% SERIES

MIL-S-19500/127

1N746A JAN,JTX,JTXV thru
1N759A JAN,JTX,JTXV

MIL-S-19500/117

1N962B JAN,JTX,JTXV thru
1N992B JAN,JTX,JTXV

***MIL-S-19500/114**

1N2804B JAN,JTX thru
1N2811B JAN,JTX
1N2813B JAN,JTX
1N2814B JAN,JTX
1N2816B JAN,JTX
1N2818B JAN,JTX thru
1N2820B JAN,JTX
1N2822B JAN,JTX thru
1N2827B JAN,JTX
1N2829B JAN,JTX
1N2831B JAN,JTX thru
1N2838B JAN,JTX
1N2840B JAN,JTX thru
1N2846 JAN,JTX

***MIL-S-19500/124**

1N2970B JAN,JTX thru
1N2977B JAN,JTX
1N2979B JAN,JTX
1N2980B JAN,JTX
1N2982B JAN,JTX
1N2984B JAN,JTX thru
1N2986B JAN,JTX
1N2988B JAN,JTX thru
1N2993B JAN,JTX
1N2995B JAN,JTX
1N2997B JAN,JTX
1N2999B JAN,JTX thru
1N3005B JAN,JTX
1N3007B JAN,JTX thru
1N3009B JAN,JTX
1N3011B JAN,JTX
1N3012B JAN,JTX
1N3014B JAN,JTX
1N3015B JAN,JTX

MIL-S-19500/115

1N3016B JAN,JTX,JTXV thru
1N3051B JAN,JTX,JTXV

***MIL-S-19500/358**

1N3305B JAN,JTX thru
1N3312B JAN,JTX
1N3314B JAN,JTX
1N3315B JAN,JTX
1N3317B JAN,JTX
1N3319B JAN,JTX thru
1N3312B JAN,JTX
1N3323B JAN,JTX thru
1N3328B JAN,JTX
1N3330B JAN,JTX
1N3332B JAN,JTX
1N3334B JAN,JTX thru
1N3340B JAN,JTX
1N3342B JAN,JTX thru
1N3344B JAN,JTX
1N3346B JAN,JTX
1N3347B JAN,JTX
1N3349B JAN,JTX
1N3350B JAN,JTX

SILICON ZENER DIODES ±5% SERIES (Cont.)

MIL-S-19500/115

1N3821A JAN,JTX,JTXV thru
1N3828A JAN,JTX,JTXV

****MIL-S-19500/272**

1N3993A JAN,JTX thru
1N4000A JAN,JTX

MIL-S-19500/435

1N4099 JAN,JTX,JTXV thru
1N4135 JAN,JTX,JTXV

MIL-S-19500/127

1N4370A JAN,JTX,JTXV thru
1N4372A JAN,JTX,JTXV

***MIL-S-19500/358**

1N4549B JAN,JTX thru
1N4554B JAN,JTX

MIL-S-19500/435

1N4614 JAN,JTX,JTXV thru
1N4627 JAN,JTX,JTXV

*Reverse Polarities (Suffix RB) are available.
**Reverse Polarities (Suffix RA) are available.

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1N. . .DEVICE NUMBERS (continued)

TC REFERENCE DIODES

MIL-S-19500

1N429 JAN . . . . . /299
1N821 JAN,JTX,JTXV . . . . . /159
1N823 JAN,JTX,JTXV . . . . . /159
1N825 JAN,JTX,JTXV . . . . . /159
1N827 JAN,JTX,JTXV . . . . . /159
1N829 JAN,JTX,JTXV . . . . . /159
1N935B JAN,JTX,JTXV. . . . . /156
1N937B JAN,JTX,JTXV. . . . . /156
1N938B JAN,JTX,JTXV. . . . . /156
1N939B JAN,JTX,JTXV. . . . . /156
1N941B JAN,JTX. . . . . /157
1N943B JAN,JTX. . . . . /157
1N944B JAN,JTX. . . . . /157
1N945B JAN,JTX. . . . . /157
1N3154 JAN,JTX. . . . . /158
1N3155 JAN,JTX. . . . . /158
1N3156 JAN,JTX. . . . . /158
1N3157 JAN,JTX. . . . . /158

RECTIFIERS

MIL-S-19500/304

1N3890 JAN,JTX,JTXV. . . . . .
1N3890R JAN,JTX,JTXV. . . . . .
1N3891 JAN,JTX,JTXV. . . . . .
1N3891R JAN,JTX,JTXV. . . . . .
1N3893 JAN,JTX,JTXV. . . . . .
1N3893R JAN,JTX,JTXV. . . . . .

MIL-S-19500/308

1N3910 JAN,JTX . . . . . .
1N3911 JAN,JTX . . . . . .
1N3912 JAN,JTX . . . . . .
1N3913 JAN,JTX . . . . . .

DIODE ASSEMBLIES

MIL-S-19500

1N1530A JAN . . . . . /320
1N1742A JAN . . . . . /298

CURRENT REGULATORS

MIL-S-19500/463

1N5285 JAN,JTX,JTXV. . . . . .
1N5286 JAN,JTX,JTXV. . . . . .
1N5287 JAN,JTX,JTXV. . . . . .
1N5288 JAN,JTX,JTXV. . . . . .
1N5289 JAN,JTX,JTXV. . . . . .

1N5290 JAN,JTX,JTXV. . . . . .
1N5291 JAN,JTX,JTXV. . . . . .
1N5292 JAN,JTX,JTXV. . . . . .
1N5293 JAN,JTX,JTXV. . . . . .
1N5294 JAN,JTX,JTXV. . . . . .

1N5295 JAN,JTX,JTXV. . . . . .
1N5296 JAN,JTX,JTXV. . . . . .
1N5297 JAN,JTX,JTXV. . . . . .
1N5298 JAN,JTX,JTXV. . . . . .
1N5299 JAN,JTX,JTXV. . . . . .

1N5300 JAN,JTX,JTXV. . . . . .
1N5301 JAN,JTX,JTXV. . . . . .
1N5302 JAN,JTX,JTXV. . . . . .
1N5303 JAN,JTX,JTXV. . . . . .
1N5304 JAN,JTX,JTXV. . . . . .

1N5305 JAN,JTX,JTXV. . . . . .
1N5306 JAN,JTX,JTXV. . . . . .
1N5307 JAN,JTX,JTXV. . . . . .
1N5308 JAN,JTX,JTXV. . . . . .
1N5309 JAN,JTX,JTXV. . . . . .

1N5310 JAN,JTX,JTXV. . . . . .
1N5311 JAN,JTX,JTXV. . . . . .
1N5312 JAN,JTX,JTXV. . . . . .
1N5313 JAN,JTX,JTXV. . . . . .
1N5314 JAN,JTX,JTXV. . . . . .

2N. . . Device Numbers

TRANSISTORS

Field Effect, High Frequency, Milliwatt, Multiple Device, Power, RF Power, Switching and Unijunction

THYRISTORS

The following tables list devices that appear in QPL-19500 (Qualified Products List) as of 15 August 1974 and are available in the JAN, JANTX, and JANTXV versions as specified. Check with your local Motorola sales office or franchised distributor for current qualification status and availability.

SWITCHING AND HIGH FREQUENCY TRANSISTORS

MIL-S-19500		
2N393 JAN . . . . . /77	2N2219A JAN,JTX,JTXV. . /251	2N3486A JAN,JTX . . . . /392
2N499 JAN . . . . . /72	2N2221 JAN,JTX,JTXV. . . /255	2N3498 JAN,JTX,JTXV . . /366
2N499A JAN . . . . . /72	2N2221A JAN,JTX,JTXV. . /255	2N3499 JAN,JTX,JTXV . . /366
2N501A JAN . . . . . /62	2N2222 JAN,JTX,JTXV . . /255	2N3500 JAN,JTX,JTXV . . /366
2N502A JAN . . . . . /112	2N2222A JAN,JTX,JTXV. . /255	2N3501 JAN,JTX,JTXV . . /366
2N502B JAN . . . . . /112	2N2369A JAN,JTX,JTXV. . /317	2N3506 JAN,JTX,JTXV . . /349
2N559 JAN,JTX . . . . . /152	2N2481 JAN,JTX . . . . . /268	2N3507 JAN,JTX,JTXV . . /349
2N703 JAN . . . . . /153	2N2857 JAN,JTX,JTXV . . /343	2N3634 JAN,JTX,JTXV . . /357
2N705 JAN . . . . . /86	2N2904 JAN,JTX,JTXV . . /290	2N3635 JAN,JTX,JTXV . . /357
2N706 JAN . . . . . /120	2N2904A JAN,JTX,JTXV . /290	2N3636 JAN,JTX,JTXV . . /357
2N708 JAN,JTX . . . . . /312	2N2905 JAN,JTX,JTXV . . /290	2N3637 JAN,JTX,JTXV . . /357
2N718A JAN,JTX,JTXV . . /181	2N2905A JAN,JTX,JTXV . /290	2N3743 JAN,JTX,JTXV . . /397
2N869A JAN,JTX . . . . . /283	2N2906 JAN,JTX,JTXV . . /291	2N3763 JAN,JTX . . . . . /396
2N914 JAN,JTX . . . . . /373	2N2906A JAN,JTX,JTXV . /291	2N3765 JAN,JTX . . . . . /396
2N916 JAN . . . . . /271	2N2907 JAN,JTX,JTXV . . /291	2N3959 JAN,JTX . . . . . /399
2N929 JAN,JTX . . . . . /253	2N2907A JAN,JTX,JTXV . /291	2N3960 JAN,JTX . . . . . /399
2N930 JAN,JTX . . . . . /253	2N3013 JAN,JTX . . . . . /287	2N4449 JAN,JTX,JTXV . . /317
2N962 JAN . . . . . /258	2N3250A JAN,JTX,JTXV. . /323	2N4453 JAN,JTX . . . . . /283
2N964 JAN . . . . . /258	2N3251A JAN,JTX,JTXV. . /323	2N4930 JAN,JTX,JTXV . . /397
2N1131 JAN . . . . . /177	2N3253 JAN . . . . . /347	2N4931 JAN,JTX,JTXV . . /397
2N1132 JAN . . . . . /177	2N3444 JAN . . . . . /347	2N4957 JAN,JTX . . . . . /426
2N1613 JAN,JTX . . . . . /181	2N3449 JAN . . . . . /338	2N5581 JAN,JTX . . . . . /423
2N2218 JAN,JTX,JTXV . . /251	2N3467 JAN,JTX,JTXV . . /348	2N5582 JAN,JTX . . . . . /423
2N2218A JAN,JTX,JTXV . /251	2N3468 JAN,JTX,JTXV . . /348	2N6365 JAN . . . . . /471
2N2219 JAN,JTX,JTXV . . /251	2N3485A JAN,JTX . . . . /392	2N6365A JAN. . . . . /471

POWER TRANSISTORS

MIL-S-19500		
2N297A JAN . . . . . /36	2N1652 JAN . . . . . /219	2N3792 JAN,JTX . . . . . /379
2N665 JAN . . . . . /58	2N1653 JAN . . . . . /219	2N3867 JAN,JTX,JTXV. . . /350
2N1120 JAN . . . . . /68	2N2079A JAN. . . . . /340	2N3868 JAN,JTX,JTXV. . . /350
2N1165 JAN . . . . . /178	2N2528 JAN . . . . . /309	2N3902 JAN,JTX . . . . . /371
2N1358 JAN . . . . . /122	2N3715 JAN,JTX. . . . . /408	2N4399 JAN,JTX . . . . . /433
2N1549A JAN . . . . . /332	2N3716 JAN,JTX. . . . . /408	2N5302 JAN,JTX . . . . . /456
2N1550A JAN . . . . . /332	2N3739 JAN,JTX. . . . . /402	2N5303 JAN,JTX . . . . . /456
2N1551A JAN . . . . . /332	2N3740 JAN,JTX. . . . . /441	2N5685 JAN,JTX . . . . . /464
2N1552A JAN . . . . . /332	2N3741 JAN,JTX. . . . . /441	2N5686 JAN,JTX . . . . . /464
2N1560A JAN. . . . . /330	2N3791 JAN,JTX. . . . . /379	
2N1651 JAN . . . . . /219		

SILICON CONTROLLED RECTIFIERS

MIL-S-19500
2N4199 JAN . . . . . /372
2N4200 JAN . . . . . /372
2N4201 JAN . . . . . /372
2N4202 JAN . . . . . /372
2N4203 JAN . . . . . /372
2N4204 JAN . . . . . /372

RF POWER TRANSISTORS

MIL-S-19500
2N700A JAN . . . . . /123
2N918 JAN,JTX,JTXV . . . /301
2N1142 JAN . . . . . /87
2N1195 JAN . . . . . /71
2N2273 JAN . . . . . /244
2N2708 JAN . . . . . /302
2N3127 JAN . . . . . /346
2N3375 JAN,JTX,JTXV . . /341
2N3553 JAN,JTX,JTXV . . /341
2N3866 JAN,JTX,JTXV. . . /398
2N3866A JAN,JTX,JTXV. . /398

FIELD-EFFECT TRANSISTORS

MIL-S-19500
2N3330 JAN,JTX. . . . . /378
2N3821 JAN,JTX. . . . . /375
2N3822 JAN,JTX. . . . . /375
2N3823 JAN,JTX. . . . . /375

MULTIPLE DEVICES

MIL-S-19500
2N2060 JAN,JTX,JTXV . . /270
2N2639 JAN,JTX,JTXV. . . /316
2N2642 JAN,JTX,JTXV. . . /316
2N2919 JAN,JTX,JTXV . . /355
2N2920 JAN,JTX,JTXV . . /355
2N3810 JAN,JTX,JTXV. . . /336
2N3811 JAN,JTX,JTXV. . . /336
2N3838 JAN,JTX,JTXV. . . /421
2N4854 JAN,JTX,JTXV. . . /421

MILLIWATT TRANSISTORS

MIL-S-19500
2N398A JAN . . . . . /174
2N404 JAN . . . . . /20
2N404A JAN . . . . . /20
2N461 JAN . . . . . /45
2N464 JAN . . . . . /49
2N465 JAN . . . . . /49
2N467 JAN . . . . . /49
2N526 JAN . . . . . /60
2N650A JAN . . . . . /175
2N651A JAN . . . . . /175
2N652A JAN . . . . . /175
2N1008B JAN . . . . . /196

UNIJUNCTION

MIL-S-19500
2N4948 JAN,JTX . . . . . /388
2N4949 JAN,JTX . . . . . /388
2N5431 JAN,JTX . . . . . /425

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The following tables list devices which are in the process of qualification for listing in QPL-19500 as of 15 August 1974. Check with your local Motorola sales office or franchised distributor for current qualification status and availability.

SWITCHING AND HIGH FREQUENCY TRANSISTORS

MIL-S-19500
2N4405 JAN,JTX. . . . . /488
2N5109 JAN,JTX. . . . . /453

POWER TRANSISTORS

MIL-S-19500
2N3439,40 JAN,JTX. . . . . /368
2N5304 (JTXV Only) . . . . . /499
2N5683,84 JAN,JTX. . . . . /466
2N6306,08 JAN,JTX. . . . . /498

UNIJUNCTION (PUT)

MIL-S-19500
2N6116 JAN,JTX. . . . . /493(EL)
2N6117 JAN,JTX. . . . . /493(EL)
2N6118 JAN,JTX. . . . . /493(EL)

FIELD-EFFECT TRANSISTORS

MIL-S-19500
2N4092 JAN,JTX. . . . . /431
2N4093 JAN,JTX. . . . . /431
2N4856,57,58 JAN,JTX . . . . . /385

MOTOROLA MIL-M-38510 PROGRAM

— the ultimate in quality assurance for integrated circuits

Motorola is the industry's pioneer manufacturer of high-reliability integrated circuits, having been the first company to be qualified as a MIL-M-38510 approved facility by the Defense Electronics Supply Center of the Department of Defense early in 1971. Motorola's extensive experience in high-reliability military and manned spacecraft programs such as Apollo, Minuteman and Safeguard, coupled with an investment of millions of dollars for research and development, has resulted in the ultimate in quality assurance for integrated circuits: the MOTOROLA MIL-M-38510 PROGRAM.

This comprehensive program is structured to provide an environment in which proven methods of manufacturing, quality assurance, monitoring, screening and testing can thrive — to give you **the most reliable product on the market today** — and to give it to you **fast!**

The MOTOROLA MIL-M-38510 PROGRAM is designed to support a broad base of test and evaluation programs for micro-electronic devices: materials, workmanship, performance capabilities, identification and processing — applied to all Motorola standard integrated circuit product, with appropriate levels of reliability. This product can be ordered in accordance with MIL-M-38510 JAN-**Qualified** standards or to the lower-cost, but similar hi-rel specifications designated as MIL-M-38510 JAN-**Processing.** (See ordering information.)

The MOTOROLA MIL-M-38510 PROGRAM is designed to facilitate delivery and to minimize specification preparation time. Beginning with a nucleus of popular IC types from our high-volume lines, the program is continually adding more devices to the list of MIL-M-38510 JAN-**Qualified** products.

Because it is a "standard" hi-rel program, the MOTOROLA MIL-M-38510 PROGRAM aids in reducing the high costs and delivery delays normally associated with "custom" hi-rel programs in the past.

It is a functional, operating program, based on the Military's own long-range objective to improve and demonstrate integrated circuit reliability, and is designed to provide hi-rel customers with the finest in quality, reliability and performance — fast!

THE MOTOROLA MIL-M-38510 PROGRAM OFFERS YOU THESE BENEFITS:

1. Standardization of environmental and electrical test procedures
2. Less specification writing required
3. Less time required in negotiating specifications
4. Fast delivery
5. Lower costs

THE MOTOROLA MIL-M-38510 PROGRAM

Under this program, Motorola integrated circuits may be procured to the specifications of MIL-M-38510 and to four levels of processing which meet the screening requirements of MIL-STD-883.

MIL-M-38510 JAN-QUALIFIED PRODUCT

Class A	Class B	Class C
JAN-QUALIFIED DEVICE MARKINGS		
JM38510/XXXXXAXX	JM38510/XXXXXBXX	JM38510/XXXXXCXX

JAN QUALIFIED

1. **G.S.I. (Government Source Inspection) provided upon request.**
2. **Must be manufactured in a Government-approved facility.**
3. **Product inventoried in distributor and OEM warehouses.**

Examples of MIL-M-38510 JAN-**Qualified** markings:

	Linear	Digital
DEVICE:	MC1741BCBJ	MC5400BCBJ
ORDER:	MC1741BCBJ	MC5400BCBJ
MARKING:	JM38510/10101BCB	JM38510/00104BCB

HOW TO ORDER MIL-M-38510 JAN-QUALIFIED PRODUCT

Basic Numbering Parameters — Example: JM38510/XXXXXBCB

J	M38510	/XXX	XX	B	C	B
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) = J — This indicates a qualified device.
(2) = M38510 — The military designator.
(3) = /XXX — This three-digit number signifies the detail specification in which the device type is found. The detail specifications, also referred to as "slash specs," generally contain more than one device type and are written for various generic groupings (i.e., TTL NAND Gates, TTL NAND Buffers, TTL Flip-Flops, Op Amps, Voltage Regulators, etc.)
(4) = XX — This two-digit number identifies the device type within the detail specification.
(5) = B — This is a single letter and specifies the device class per MIL-M-38510 and will be class A, B or C.
(6) = Case Outline. (See listings in adjacent column).
(7) = Lead finish. (See listings in adjacent column).

The Motorola equivalent of the JAN M38510 part number is as shown in the following example and should be referenced when ordering your specific device requirement.

MCXXXX	BCB	J
(1)	(2)	(3)

1. The MCXXXX designates the Motorola source device type.
2. The first three letters after the part type have the same meaning and order as in the JAN part numbering system. This will simplify your cross-referencing.
3. J, which is the last letter in the part number, designates a JAN-qualified device.

Case outline and lead finish designations are common to both JAN Qualified and JAN Processed devices:

QUALIFIED # (6) PROCESSED # (3)

C — This is a single letter and specifies the package or case outline. A list of the currently-defined package types (the letters define the same case outline for all detail specifications) is shown below:

CASE OUTLINE DESIGNATOR	CASE OUTLINE
*A	— ¼" x ¼" flat pack, 14-pin
B	— ⅛" x ¼" flat pack, 14-pin
C	— ¼" x ¾" dual-in-line, 14-pin
*D	— ¼" x ⅜" flat pack, 14-pin
E	— ¼" x ¾" dual-in-line, 16-pin
F	— ¼" x ⅜" flat pack, 16-pin
G	— 8-lead can
H	— ¼" x ¼" flat pack, 10-lead
I	— 10-lead can
J	— ½" x 1¼" dual-in-line, 24-pin
K	— ⅜" x ½" flat pack, 24-pin
Z	— ¼" x ½" flat pack, 24-pin

* A and D outlines are interchangeable

MIL-M-38510 JAN-PROCESSED PRODUCT

Class A **Class B** **Class C** **Class D**

JAN-PROCESSED DEVICE MARKINGS

MC38510/XXXXAXXM	MC38510/XXXXBXXM	MC38510/XXXXCXXM	MC38510/XXXXDXXM
MC38510/XXXXAXXS	MC38510/XXXXBXXS	MC38510/XXXXCXXS	MC38510/XXXXDXXS

JAN PROCESSED

1. No G.S.I. provided.
2. Government-approved facility not required.
3. Product supplied with MIL-M-38510 electricals will be designated by an "M" suffix.
4. Product supplied with Motorola standard data sheet electricals will be designated by an "S" suffix.
5. Devices will be manufactured using design and processing guidelines contained in MIL-M-38510.
6. Inventories will be maintained prior to burn-in and final electrical tests.

Examples of MIL-M-38510 JAN-**Processed** markings:

Linear

DEVICE:	MC1741BCB (M or S)
ORDER:	MC1741BCB (M or S)
MARKINGS:	MC38510/1741BCB (M or S)

Digital

DEVICE:	MC5400BCB (M or S)
ORDER:	MC5400BCB (M or S)
MARKINGS:	MC38510/5400BCB (M or S)

QUALIFIED #(7) PROCESSED #(4)

B — This is a single letter and specifies the finish to be used on the package leads. There are three types of lead finishes which are acceptable for JAN product. They are:

LEAD FINISH SYMBOL	LEAD FINISH
A	— Kovar or Alloy 42, with hot solder dip
B	— Kovar or Alloy 42, with bright acid tin plate
C	— Kovar or Alloy 42, with gold plate

Note: For other Motorola standard packaging, not currently identified in MIL-M-38510, contact your Motorola representative.

HOW TO ORDER MIL-M-38510 JAN-PROCESSED PRODUCT

EXAMPLE: If you wish to enter an order for an MCXXXX Class B device in a 14-pin, dual-in-line ceramic package with the lead finish to be tin plate and electrically tested to Motorola's standard data sheet electricals, the order would be entered as follows:

MCXXXX	B	C	B	S
(1)	(2)	(3)	(4)	(5)

(1) = Motorola device type.
(2) = B — This is a single letter and specifies the device class per MIL-M-38510 for Classes A, B and C. Class D is an added Motorola JAN processing class and is the same as the MIL-M-38510 Class B except for the differences shown in the following screening procedures table.
(3) = Case Outline. (See listings in adjacent column).
(4) = Lead finish. (See listings in adjacent column).
(5) = S — This is a single letter and specifies the electrical specifications to which the device is to be screened during electrical test and will be either an S or M. "S" specifies the use of Motorola standard data sheet electricals. "M" specifies the use of JAN slash-sheet electricals where they exist.

Electrical Test Symbols	Test Level
S	— Motorola standard data sheet electricals
M	— JAN slash-sheet electricals

SCREENING PROCEDURES

(To MIL-STD-883 Requirements)

This program establishes screening procedures for total lot screening of integrated circuits to assist in achieving levels of quality and reliability commensurate with the intended application. In recognition of the fact that the level of screening has a direct impact on the cost of the product as well as its quality and reliability, four standard levels of screening are provided to coincide with four device classes or levels of product assurance.

Flexibility is provided in the choice of conditions and stress levels to provide screens, tailored to a particular product or application. Selection of a level **better** than that required for the specific product and application will, of course, result in unnecessary expense. A level **less** than that required will result in an unwarranted risk that reliability and other requirements will not be met. For general hi-rel applications, the Class B screening level should be considered.

	CLASS A		CLASS B		CLASS C		CLASS D	
SCREEN	METHOD	RQMT	METHOD	RQMT	METHOD	RQMT	METHOD	RQMT
Internal Visual (Precap)	2010 Cond A and 38510	100%	2010 Cond B and 38510	100%	2010 Cond B and 38510	100%	2010 Cond B and 38510	100%
Stabilization Bake	1008 24 hrs min, test condition C	100%	1008, 24 hrs min, test condition C	100%	1008, 24 hrs min, test condition C	100%	1008, 24 hrs min, test condition C	100%
Thermal Shock	1011, Cond A	100%		—		—		—
Temperature Cycling	1010, Cond C	100%	1010, Cond C	100%	1010 Cond C	100%	1010, Cond C	100%
Mechanical Shock	2002 Cond F One Shock in Y_1 plane only **or** 5 shocks at Cond B in Y_1 plane	100%		—		—		—
Constant Acceleration	2001 Cond E (min) in Y_2 plane then Y_1 plane	100%	2001 Cond E (min) Y_1 plane	100%	2001 Cond E (min) Y_1 plane	100%	2001 Cond E (min) Y_1 plane	100%
Seal (a) Fine (b) Gross	1014	100%	1014	100%	1014	100%	1014	100%
Interim Electrical Parameters	JAN slash-sheet electrical specification unless otherwise designated	100%	JAN slash-sheet electrical specifications unless otherwise designated	100%		—	Motorola stand. data sheet electrical specs unless otherwise indicated	100%
Burn-in test	1015 240 hrs @ 125°C min	100%	1015 168 hrs @ 125°C min	100%		—	1015 168 hrs @ 125°C min	100%
Interim Electricals	JAN slash-sheet electrical specifications unless otherwise designated	100%						
Reverse Bias Burn-in	1015 Cond A or C 72 hrs at 150°C min	100%						
Final Electrical tests (a) Static tests (1) 25°C (Subgroup 1 table 1 5005)	JAN slash-sheet electrical specifications unless otherwise designated	100%	JAN slash-sheet electrical specifications unless otherwise designated	100%	JAN slash-sheet electrical specifications unless otherwise designated	100%	Motorola stand. data sheet electrical specs unless otherwise indicated	100%
(2) Max and min rated op. temperature (subgroups 2 and 3 table 1, 5005)		100%		100%		—		—
(b) Dynamic tests and/or switching tests 25°C (subgroup 4 and 9 table 1, 5005)		100%		100%		—		—
(C) Functional test 25°C (subgroup 7 table 1, 5005)		100%		100%		100%		100%
Radiographic	2012	100%		—		—		—
Qualification or quality conformance inspection	5005 Class A	per 38510 *	5005 Class B	per 38510 *	5005 Class C	per 38510 *	5005 Class B	*
External Visual	2009	100%	2009	100%	2009	100%	2009	100%

*Group A per 5005, Generic data available for groups B & C on devices produced to Class B, C, D for JAN processed (from JAN program)

INTEGRATED CIRCUITS

A typical military part number consists of the JAN prefix, the general specification number, the detail specification number, and a coded part number.

PART NUMBER DESCRIPTION

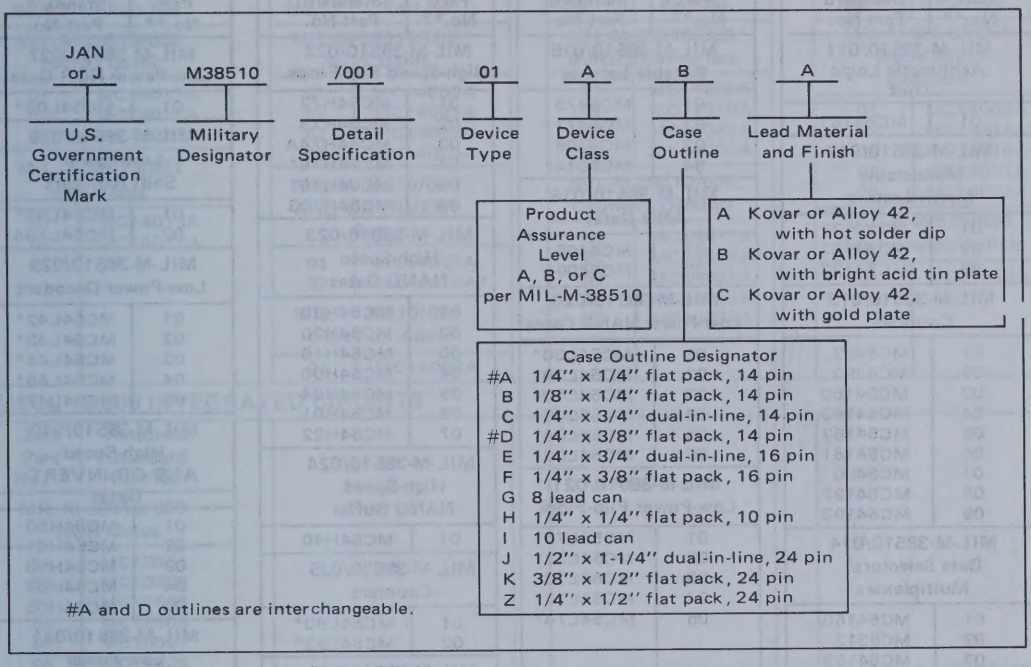
JAN or J
U.S. Government Certification Mark
M38510
Military Designator
/001
Detail Specification
01
Device Type
A
Device Class
B
Case Outline
A
Lead Material and Finish
Product Assurance Level A, B, or C per MIL-M-38510
A Kovar or Alloy 42, with hot solder dip
B Kovar or Alloy 42, with bright acid tin plate
C Kovar or Alloy 42, with gold plate
Case Outline Designator
#A 1/4" x 1/4" flat pack, 14 pin
B 1/8" x 1/4" flat pack, 14 pin
C 1/4" x 3/4" dual-in-line, 14 pin
#D 1/4" x 3/8" flat pack, 14 pin
E 1/4" x 3/4" dual-in-line, 16 pin
F 1/4" x 3/8" flat pack, 16 pin
G 8 lead can
H 1/4" x 1/4" flat pack, 10 pin
I 10 lead can
J 1/2" x 1-1/4" dual-in-line, 24 pin
K 3/8" x 1/2" flat pack, 24 pin
Z 1/4" x 1/2" flat pack, 24 pin
#A and D outlines are interchangeable.

TABLE I – JAN PART NUMBER TO MOTOROLA PART NUMBER CROSS REFERENCE

Contact your local Motorola sales office or franchised distributor for current qualification status and availability.

MTTL INTEGRATED CIRCUITS

JAN Part No.**	Motorola Standard Part No.
MIL-M-38510/001 NAND Gates	
01	MC5430
02	MC5420
03	MC5410
04	MC5400
05	MC5404
06	MC5412 *
07	MC5401
08	MC5405
09	MC5403
MIL-M-38510/002 Flip-Flops	
01	MC5472
02	MC5473
03	MC54107
04	MC5476
05	MC5474 *
06	MC5470
07	MC5479

JAN Part No.**	Motorola Standard Part No.
MIL-M-38510/003 NAND Buffers	
01	MC5440
02	MC5437
03	MC5438
MIL-M-38510/004 NOR Gates	
01	MC5402
02	MC5423
03	MC5425
04	MC5427
MIL-M-38510/005 AND-OR-INVERT Gates	
01	MC5450
02	MC5451
03	MC5453
04	MC5454

JAN Part No.**	Motorola Standard Part No.
MIL-M-38510/006 Binary Full Adders	
01	MC15482
02	MC5483
MIL-M-38510/007 Exclusive OR Gate	
01	MC3121
MIL-M-38510/008 Hex Buffers/Drivers	
01	MC5406
02	MC5416
03	MC5407
04	MC5417

JAN Part No.**	Motorola Standard Part No.
MIL-M-38510/009 Shift Registers	
01	MC5495
02	MC5496
03	MC54164A
04	MC54165
05	MC54194
06	MC54195
MIL-M-38510/010 Decoders	
01	MC5442
02	MC5443
03	MC5444
04	MC5445
05	MC54145
06	MC5446 *
07	MC5447 *
08	MC5448
09	MC5449

* Not presently being manufactured or planned for immediate introduction.
** JAN type number must be completed as shown in the Part Number Description.

TABLE I – JAN PART NUMBER TO MOTOROLA PART NUMBER CROSS REFERENCE (continued)

MTTL INTEGRATED CIRCUITS (continued)

JAN Part No.**	Motorola Standard Part No.
MIL-M-38510/011 Arithmetic Logic Unit	
01	MC54181
MIL-M-38510/012 Monostable Multivibrators	
01	MC54121
02	MC54122
03	MC54123
MIL-M-38510/013 Counters	
01	MC5492
02	MC5493
03	MC54160
04	MC54163
05	MC54162
06	MC54161
07	MC5490
08	MC54192
09	MC54193
MIL-M-38510/014 Data Selectors/ Multiplexers	
01	MC54150
02	MC9312
03	MC54153
04	MC9309
05	MC9322
06	MC54151

JAN Part No.**	Motorola Standard Part No.
MIL-M-38510/015 Bistable Latches	
01	MC5475
02	MC5477
03	MC9308
04	MC9314
MIL-M-38510/016 AND Gates	
01	MC5408
02	MC5409
MIL-M-38510/020 Low-Power NAND Gates	
01	MC54L30*
02	MC54L20*
03	MC54L10*
04	MC54L00*
05	MC54L04*
06	MC54L03*
MIL-M-38510/021 Low-Power Flip-Flops	
01	MC54L71*
02	MC54L72*
03	MC54L73*
04	MC54L78*
05	MC54L74*

JAN Part No.**	Motorola Standard Part No.
MIL-M-38510/022 High-Speed Flip-Flops	
01	MC54H72
02	MC54H73
03	MC54H74A
04	MC54H76*
05	MC54H101
06	MC54H103
MIL-M-38510/023 High-Speed NAND Gates	
01	MC54H30
02	MC54H20
03	MC54H10
04	MC54H00
05	MC54H04
06	MC54H01
07	MC54H22
MIL-M-38510/024 High-Speed NAND Buffer	
01	MC54H40
MIL-M-38510/025 Counters	
01	MC54L90*
02	MC54L93*
MIL-M-38510/026 Low-Power Exclusive OR Gate	
01	MC54L86*

JAN Part No.**	Motorola Standard Part No.
MIL-M-38510/027 Low-Power NOR Gate	
01	MC54L02*
MIL-M-38510/028 Low-Power Shift Registers	
01	MC54L95*
02	MC54L164*
MIL-M-38510/029 Low-Power Decoders	
01	MC54L42*
02	MC54L43*
03	MC54L44*
04	MC54L46*
05	MC54L47*
MIL-M-38510/040 High-Speed AND-OR-INVERT Gates	
01	MC54H50
02	MC54H51
03	MC54H53
04	MC54H54
05	MC54H55
MIL-M-38510/041 Low-Power AND-OR-INVERT Gates	
01	MC54L51*
02	MC54L54*
03	MC54L55*

MDTL INTEGRATED CIRCUITS

JAN Part No.**	Motorola Standard Part No.
MIL-M-38510/030 NAND Gates	
01	MC930
02	MC935
03	MC936
04	MC946
05	MC962

*Not presently being manufactured or planned for immediate introduction.

**JAN type number must be completed as shown in the Part Number Description.

TABLE I – JAN PART NUMBER TO MOTOROLA PART NUMBER CROSS REFERENCE (continued)

McMOS INTEGRATED CIRCUITS

JAN Part No.**	Motorola Standard Part No.
MIL-M-38510/050 NAND Gates	
01	MC14011A
02	MC14012A
03	MC14023A
MIL-M-38510/051 Flip-Flops	
01	MC14013A
02	MC14027A

JAN Part No.**	Motorola Standard Part No.
MIL-M-38510/052 NOR Gates	
01	MC14000A
02	MC14001A
03	MC14002A
04	MC14025A
MIL-M-38510/053 AND-OR-INVERT Gates	
01	MC14007A
02	MC14019A*
MIL-M-38510/054 4-Bit Full Adder	
01	MC14008A

JAN Part No.**	Motorola Standard Part No.
MIL-M-38510/055 Buffers/Converters	
01	MC14009A
02	MC14010A
03	MC14049A
04	MC14050A
MIL-M-38510/056 Counters/Dividers	
01	MC14017A
02	MC14018A*
03	MC14020A
04	MC14022A
05	MC14024A

JAN Part No.**	Motorola Standard Part No.
MIL-M-38510/057 Static Shift Registers	
01	MC14006A
02	MC14014A*
03	MC14015A
04	MC14021A
05	MC14031A*
MIL-M-38510/058 Quad Analog Switch	
01	MC14016A

MECL 10,000 INTEGRATED CIRCUITS

JAN Part No.**	Motorola Standard Part No.
MIL-M-38510/060 NOR Gates	
01	MC10501
02	MC10502
03	MC10505
04	MC10506
05	MC10507
06	MC10509

LINEAR INTEGRATED CIRCUITS

JAN Part No.**	Motorola Standard Part No.
MIL-M-38510/101 Operational Amplifiers	
01	MC1741
02	MC1747
03	MLM101A
04	MLM108A

JAN Part No.**	Motorola Standard Part No.
MIL-M-38510/102 Voltage Regulator	
01	MC1723
MIL-M-38510/103 Voltage Comparators	
01	MC1710
02	MC1711
03	MLM106*
04	MLM111*

JAN Part No.**	Motorola Standard Part No.
MIL-M-38510/104 Line Drivers and Receivers	
01	MC55107
02	MC55108
03	MC9614*
04	MC9615*
05	MC55113*
MIL-M-38510/105 Video Amplifier	
01	MC1733

JAN Part No.**	Motorola Standard Part No.
MIL-M-38510/106 Voltage Follower Operational Amplifiers	
01	MLM102*
02	MLM110
MIL-M-38510/107 Voltage Regulator	
01	MLM109

MEMORIES

JAN Part No.**	Motorola Standard Part No.
MIL-M-38510/201 Programmable Read Only Memories	
01	MCM5303
02	MCM5304

*Not presently being manufactured or planned for immediate introduction.

**JAN type number must be completed as shown in the Part Number Description.

TABLE II – MOTOROLA PART NUMBER TO JAN PART NUMBER CROSS REFERENCE

MTTL INTEGRATED CIRCUITS

Motorola Standard Part No.	Description	JAN Part No.**
MC15482	2-Bit Full Adder	/006 01
MC3121	Quad 2-Input Exclusive OR Gate	/007 01
MC5400	Quad 2-Input Positive NAND Gate	/001 04
MC5401	Quad 2-Input Positive NAND Gate (Open Collector Output)	/001 07
MC5402	Quad 2-Input Positive NOR Gate	/004 01
MC5403	Quad 2-Input Positive NAND Gate (Open Collector Output) (Pin connections different from MC5401)	/001 09
MC5404	Hex 1-Input Inverter Gate	/001 05
MC5405	Hex 1-Input Inverter Gate (Open Collector Output)	/001 08
MC5406	Hex Inverter Buffer/Driver (30-Volt Output)	/008 01
MC5407	Hex Buffer/Driver (30-Volt Output)	/008 03
MC5408	Quad 2-Input Positive AND Gate	/016 01
MC5409	Quad 2-Input Positive AND Gate (Open Collector Output)	/016 02
MC5410	Triple 3-Input Positive NAND Gate	/001 03
MC5412 *	Triple 3-Input Positive NAND Gate (Open Collector Output)	/001 06
MC5416	Hex Inverter Buffer/Driver (15-Volt Output)	/008 02
MC5417	Hex Buffer/Driver (15-Volt Output)	/008 04
MC5420	Dual 4-Input Positive NAND Gate	/001 02
MC5423	Dual 4-Input Positive NOR Gate with Strobe and Expandable Input	/004 02
MC5425	Dual 4-Input Positive NOR Gate with Strobe	/004 03
MC5427	Triple 3-Input Positive NOR Gate	/004 04
MC5430	Single 8-Input Positive NAND Gate	/001 01
MC5437	Quad 2-Input Positive NAND Buffer	/003 02
MC5438	Quad 2-Input Positive NAND Buffer (Open Collector Output)	/003 03
MC5440	Dual 4-Input Positive NAND Buffer	/003 01
MC5442	BCD-to-Decimal Decoder	/010 01
MC5443	Excess-3-to-Decimal Decoder	/010 02
MC5444	Excess-3-Gray-to-Decimal Decoder	/010 03
MC5445	BCD-to-Decimal Decoder/Driver (30-Volt, Open Collector Output)	/010 04
MC5446 *	BCD-to-Seven-Segment Decoder/Driver (30-Volt, Open Collector Output)	/010 06
MC5447 *	BCD-to-Seven-Segment Decoder/Driver (15-Volt, Open Collector Output)	/010 07
MC5448	BCD-to-Seven-Segment Decoder/Driver	/010 08
MC5449	BCD-to-Seven-Segment Decoder/Driver (5.5-Volt, Open Collector Output)	/010 09
MC5450	Expandable Dual 2-Wide, 2-Input AND-OR-INVERT Gate	/005 01
MC5451	Dual 2-Wide, 2-Input AND-OR-INVERT Gate	/005 02
MC5453	Expandable 4-Wide, 2-Input AND-OR-INVERT Gate	/005 03
MC5454	4-Wide, 2-Input AND-OR-INVERT Gate	/005 04
MC5470	Single Edge-Triggered J-K Flip-Flop	/002 06
MC5472	Single J-K Master-Slave Flip-Flop	/002 01
MC5473	Dual J-K Master-Slave Flip-Flop (No Preset)	/002 02
MC5474 *	Dual D-Type Edge-Triggered Flip-Flop	/002 05
MC5475	4-Bit Latch (Complementary Outputs)	/015 01
MC5476	Dual J-K Master-Slave Flip-Flop	/002 04
MC5477	4-Bit Latch	/015 02
MC5479	Dual D-Type Edge-Triggered Flip-Flop (Buffered Output)	/002 07
MC5483	4-Bit Full Adder	/006 02
MC5490	Decade Counter	/013 07
MC5492	Divide-by-12 Counter	/013 01
MC5493	4-Bit Binary Counter	/013 02
MC5495	4-Bit Right-Shift, Left-Shift Register	/009 01
MC5496	5-Bit Shift Register	/009 02
MC54107	Dual J-K Master-Slave Flip-Flop (No Preset)	/002 03
MC54121	Single Monostable Multivibrator	/012 01
MC54122	Single Retriggerable Monostable Multivibrator with Clear	/012 02
MC54123	Dual Retriggerable Monostable Multivibrator with Clear	/012 03
MC54145	BCD-to-Decimal Decoder/Driver (15-Volt, Open Collector Output)	/010 05
MC54150	16-Input Data Selector/Multiplexer, with Enable	/014 01
MC54151	8-Input Data Selector/Multiplexer, with Enable	/014 06
MC54153	Dual 4-Input Data Selector/Multiplexer, with Enable	/014 03
MC54160	Synchronous 4-Bit Decade Counter (Asynchronous Clear)	/013 03
MC54161	Synchronous 4-Bit Binary Counter (Asynchronous Clear)	/013 06

* Not presently being manufactured or planned for immediate introduction.
** JAN type number must be completed as shown in the Part Number Description.

TABLE II – MOTOROLA PART NUMBER TO JAN PART NUMBER CROSS REFERENCE (continued)

MTTL INTEGRATED CIRCUITS (continued)

Motorola Standard Part No.	Description	JAN Part No.**
MC54162	Synchronous 4-Bit Decade Counter (Synchronous Clear)	/013 05
MC54163	Synchronous 4-Bit Binary Counter (Synchronous Clear)	/013 04
MC54164A	8-Bit Parallel-Out Serial Shift Register	/009 03
MC54165	8-Bit Parallel-Load Shift Register	/009 04
MC54181	Arithmetic Logic Unit/Function Generator	/011 01
MC54192	Presettable Decade Up/Down Counter	/013 08
MC54193	Presettable 4-Bit Binary Up/Down Counter	/013 09
MC54194	4-Bit Bidirectional Shift Register	/009 05
MC54195	4-Bit Parallel-Access Shift Register	/009 06
MC54H00	Quad 2-Input Positive NAND Gate (High-Speed)	/023 04
MC54H01	Quad 2-Input Positive NAND Gate (High-Speed, Open Collector Output)	/023 06
MC54H04	Hex 1-Input Inverter Gate (High-Speed)	/023 05
MC54H10	Triple 3-Input Positive NAND Gate (High-Speed)	/023 03
MC54H20	Dual 4-Input Positive NAND Gate (High-Speed)	/023 02
MC54H22	Dual 4-Input Positive NAND Gate (High-Speed, Open Collector Output)	/023 07
MC54H30	Single 8-Input Positive NAND Gate (High-Speed)	/023 01
MC54H40	Dual 4-Input Positive NAND Buffer (High-Speed)	/024 01
MC54H50	Expandable Dual 2-Wide, 2-Input AND-OR-INVERT Gate (High-Speed)	/040 01
MC54H51	Dual 2-Wide, 2-Input AND-OR-INVERT Gate (High-Speed)	/040 02
MC54H53	Expandable 4-Wide 2-2-2-3 Input AND-OR-INVERT Gate (High-Speed)	/040 03
MC54H54	4-Wide 2-2-2-3 Input AND-OR-INVERT Gate (High-Speed)	/040 04
MC54H55	Expandable 2-Wide, 4-Input AND-OR-INVERT Gate	/040 05
MC54H72	Single J-K Master-Slave Flip-Flop (High-Speed)	/022 01
MC54H73	Dual J-K Master-Slave Flip-Flop (High-Speed)	/002 02
MC54H74A	Dual D-Type Edge-Triggered Flip-Flop (High-Speed)	/022 03
MC54H76*	Dual J-K Flip-Flop (High-Speed)	/022 04
MC54H101	J-K Edge-Triggered Flip-Flop (High-Speed)	/022 05
MC54H103	Dual J-K Edge-Triggered Flip-Flop (High-Speed)	/022 06
MC54L00*	Quad 2-Input Positive NAND Gate (Low-Power)	/020 04
MC54L02*	Quad 2-Input Positive NOR Gate (Low-Power)	/027 01
MC54L03*	Quad 2-Input Positive NAND Gate (Low-Power, Open Collector Output)	/020 06
MC54L04*	Hex 1-Input Inverter Gate (Low-Power)	/020 05
MC54L10*	Triple 3-Input Positive NAND Gate (Low-Power)	/020 03
MC54L20*	Dual 4-Input Positive NAND Gate (Low-Power)	/020 02
MC54L30*	Single 8-Input Positive NAND Gate (Low-Power)	/020 01
MC54L42*	BCD-to-Decimal Decoder (Low-Power)	/029 01
MC54L43*	Excess-3-to-Decimal Decoder (Low-Power)	/029 02
MC54L44*	Excess-3-Gray-to-Decimal Decoder (Low-Power)	/029 03
MC54L46*	BCD-to-Seven-Segment Decoder/Driver (Low-Power, 30-Volt, Open Collector Output)	/029 04
MC54L47*	BCD-to-Seven-Segment Decoder/Driver (Low-Power, 15-Volt, Open Collector Output)	/029 05
MC54L51*	Dual 2-Wide AND-OR-INVERT Gate (Low-Power)	/041 01
MC54L54*	4-Wide, 3-2-2-3 Input AND-OR-INVERT Gate (Low-Power)	/041 02
MC54L55*	2-Wide, 4-Input AND-OR-INVERT Gate (Low-Power)	/041 03
MC54L71*	R-S Master-Slave Flip-Flop (Low-Power)	/021 01
MC54L72*	J-K Master-Slave Flip-Flop (Low-Power)	/021 02
MC54L73*	Dual J-K Master-Slave Flip-Flop (Low-Power)	/021 03
MC54L74*	Dual D-Type Edge-Triggered Flip-Flop (Low-Power)	/021 05
MC54L78*	Dual J-K Master-Slave Flip-Flop (Low-Power)	/021 04
MC54L86*	Quad 2-Input Exclusive OR Gate (Low-Power)	/026 01
MC54L90*	Decade Counter (Low-Power)	/025 01
MC54L93*	4-Bit Binary Counter (Low-Power)	/025 02
MC54L95*	4-Bit Right-Shift, Left-Shift Register (Low-Power)	/028 01
MC54L164*	8-Bit Parallel-Out Serial Shift Register (Low-Power)	/028 02
MC9308	Dual 4-Bit Latch	/015 03
MC9309	Dual 4-Input Data Selector/Multiplexer, without Enable	/014 04
MC9312	8-Input Data Selector/Multiplexer, with Enable	/014 02
MC9314	4-Bit Latch, with Master Reset	/015 04
MC9322	Quad 2-Input Data Selector/Multiplexer, with Enable	/014 05

*Not presently being manufactured or planned for immediate introduction.

**JAN type number must be completed as shown in the Part Number Description.

TABLE II – MOTOROLA PART NUMBER TO JAN PART NUMBER CROSS REFERENCE (continued)

MDTL INTEGRATED CIRCUITS

Motorola Standard Part No.	Description	JAN Part No.**
MC930	Expandable Dual 4-Input NAND Gate	/030 01
MC935	Hex Inverter, Without Output Resistors	/030 02
MC936	Hex Inverter	/030 03
MC946	Quad 2-Input NAND Gate	/030 04
MC962	Triple 3-Input NAND Gate	/030 05

McMOS INTEGRATED CIRCUITS

Motorola Standard Part No.	Description	JAN Part No.**
MC14000A	Dual 3-Input NOR Gate plus Inverter	/052 01
MC14001A	Quad 2-Input NOR Gate	/052 02
MC14002A	Dual 4-Input NOR Gate	/052 03
MC14006A	Dual 4-Stage/Dual 5-Stage Static Shift Register	/057 01
MC14007A	Dual Complementary Pair plus Inverter	/053 01
MC14008A	4-Bit Full Adder	/054 01
MC14009A	Inverting Hex Buffer	/055 01
MC14010A	Non-Inverting Hex Buffer	/055 02
MC14011A	Quad 2-Input NAND Gate	/050 01
MC14012A	Dual 4-Input NAND Gate	/050 02
MC14013A	Dual D-Type Edge-Triggered Flip-Flop	/051 01
MC14014A*	8-Stage Synchronous Parallel or Serial Input/Serial Output Static Shift Register	/057 02
MC14015A	Dual 4-Stage Serial Input/Parallel Output Static Shift Register	/057 03
MC14016A	Quad Analog Switch/Quad Multiplexer	/058 01
MC14017A	Decade Counter/Divider	/056 01
MC14018A*	Presettable Divide-by-N Counter	/056 02
MC14019A*	Quad AND-OR-Select Gate	/053 02
MC14020A	14-Stage Ripple-Carry Binary Counter/Divider	/056 03
MC14021A	8-Stage Asynchronous Parallel Input/Serial Output or Synchronous Serial Input/Serial Output Static Shift Register	/057 04
MC14022A	Divide-by-8 Counter/Divider	/056 04
MC14023A	Triple 3-Input NAND Gate	/050 03
MC14024A	7-Stage Binary Counter	/056 05
MC14025A	Triple 3-Input NOR Gate	/052 04
MC14027A	Dual J-K Master-Slave Flip-Flop	/051 02
MC14031A*	64-Stage Static Shift Register with Delayed Clock Output and Recirculation Capability	/057 05
MC14049A	Hex Buffer	/055 03
MC14050A	Hex Buffer	/055 04

MECL 10,000 INTEGRATED CIRCUITS

Motorola Standard Part No.	Description	JAN Part No.**
MC10501	Quad OR/NOR Gate with Strobe	/060 01
MC10502	Triple 2-Input NOR Gate Plus 2-Input OR/NOR Gate	/060 02
MC10505	Triple 2-3-2 Input OR/NOR Gate	/060 03
MC10506	Triple 4-3-3 Input NOR Gate	/060 04
MC10507	Triple Exclusive OR/NOR Gate	/060 05
MC10509	Dual 4-5 Input OR/NOR Gate	/060 06

TABLE II – MOTOROLA PART NUMBER TO JAN PART NUMBER CROSS REFERENCE (continued)

LINEAR INTEGRATED CIRCUITS

Motorola Standard Part No.	Description	JAN Part No.**
MC1710	Single Differential Voltage Comparator	/103 01
MC1711	Dual Channel Differential Voltage Comparator	/103 02
MC1723	Precision Voltage Regulator	/102 01
MC1741	Single Operational Amplifier (Internally Compensated)	/101 01
MC1747	Dual Operational Amplifier (Internally Compensated)	/101 02
MC9614*	Dual Differential Line Driver	/104 03
MC9615*	Dual Differential Line Receiver	/104 04
MC55107	Dual Line Receiver	/104 01
MC55108	Dual Line Receiver (Open Collector Output)	/104 02
MC55113*	Dual Differential Line Driver (3-State Output With High-Impedance Off-State.	/104 05
MLM101A	Single Operational Amplifier (Externally Compensated)	/101 03
MLM102*	Voltage Follower Operational Amplifier	/106 01
MLM106*	Single Voltage Comparator/Buffer	/103 03
MLM108A	Single Operational Amplifier (Externally Compensated)	/101 04
MLM109	Voltage Regulator	/107 01
MLM110	Voltage Follower Operational Amplifier	/106 02
MLM111*	Precision Voltage Comparator/Buffer	/103 04

MEMORIES

Motorola Standard Part No.	Description	JAN Part No.**
MCM5303	64-Word/8-Bits-per-Word PROM (Open Collector Output)	/201 01
MCM5304	64-Word/8-Bits-per-Word PROM (Internal Pullup Resistor)	/201 02

*Not presently being manufactured or planned for immediate introduction.

**JAN type number must be completed as shown in the Part Number Description.

Motorola has made available to the hybrid circuit manufacturer, in chip form, virtually all of the thousands of discrete and integrated circuit devices in its standard product catalog. More detailed information on these chips, including testing, visual inspection, packaging, size, geometry and metallization is presented in Motorola's new Semiconductor Chips Data Book.

Chips

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Packaging and Hardware

8

LEAD TAPE PACKAGING STANDARDS FOR AXIAL-LEAD COMPONENTS

1.0 SCOPE

This document covers packaging requirements for the following axial-lead components for use in automatic testing and assembly equipment: Motorola Case 51 (DO-7), Case 52 (DO-13), Case 59 (DO-41), Case 267, and Case 17. Packaging, as covered in this document, shall consist of axial-lead components mounted by their leads on pressure-sensitive tape, either wound onto a reel or folded in an oriented manner in a container (ammunition pack).

2.0 PURPOSE

This document establishes Motorola standard practices for lead-tape packaging of axial-lead components and meets the requirements of EIA Standard RS-296-B, "Reel Packaging of Components with Axial Leads."

3.0 REQUIREMENTS

3.1 Component Leads

3.1.1 Component leads shall not be bent beyond 0.047 inch from their nominal position. See Figure 2.

3.1.2 The "C" dimension shall be governed by the overall length of the reel packaged component. The distance between flanges shall be 0.125 inch to 0.250 inch greater than the overall component length. See Figures 2 and 3.

3.2 Orientation

All polarized components must be oriented in one direction. The cathode lead tape shall be blue, and the anode tape shall be white. See Figure 1.

3.3 Reeling

3.3.1 Components on any reel shall not represent more than two date codes when date code identification is required.

3.3.2 Component leads shall be positioned perpendicularly between pairs of 0.250 inch tape. See Figure 2.

3.3.3 A minimum 12 inch leader of tape shall be provided before the first and last component on the reel.

3.3.4 50 lb. Kraft paper must be wound between layers of components as far as necessary for component protection. Width of paper is 0.062 inch to 0.750 inch less than "C" dimension of reel. See Figure 3.

3.3.5 A row of components must be centered between the tapes $\pm$ 0.047 inch. In addition, individual components may deviate from center of component row $\pm$ 0.031 inch. See Figure 2.

3.3.6 Staples shall not be used for splicing. No more than 4 layers of tape shall be used in any splice area and no tape shall be offset from another by more than 0.031 inch noncumulative. Tape splices shall overlap at least 6 inches for butt joints and at least 3 inches for lap joints, and shall not be weaker than unspliced tape.

3.3.7 Quantity per reel shall be as indicated in Table 1. When reeling quantity is less than the established minimum of a suitable sized reel, an ammunition pack will be used. Quantities less than the ammunition pack minimum will not be lead-taped.

3.3.8 A maximum of 10 components may be missing from any 10 foot section. A maximum of 2 consecutive components may be missing, provided this gap is followed by 6 consecutive components.

3.3.9 The single face roll pad shall be placed around the finished reel and taped securely. Each reel shall then be placed in an appropriate container.

3.4 Marking

Minimum reel and carton marking shall consist of the following: See Figure 3.

Customer Part Number
Purchase Order Number
Quantity
Date of Reeling (when applicable)
Manufacturer's Name
Electrical Value (when applicable)
Date Codes (when applicable; see Note 3.3.1)
Tape (when applicable)

4.0 EXCEPTIONS

Requirements differing from this Motorola standard shall be negotiated with the factory.

LEAD TAPE PACKAGING STANDARDS FOR AXIAL-LEAD COMPONENTS (continued)

TABLE 1 – PACKAGING

Component Type (Case)	Quantity Per Reel Min/Max	Ammunition Pack Qty. Min	Component Spacing A	Tape Spacing B	Reel Dimensions C	Reel Dimensions D
Case 51 (DO-7) Case 59 (DO-41)	1000/3000	500	0.200 ± 0.015	2.00 ± 0.010	3.00	10.50
Case 17	1000/2000	500	0.200 ± 0.015	2.00 ± 0.010	3.00	10.50
Case 52 (DO-13)	500/1500	250	0.375 ± 0.015	2.375 ± 0.020	3.81	14.00
Case 267	500/900	250	0.375 ± 0.015	2.00 ± 0.010	3.00	10.50

FIGURE 1 – REEL PACKING

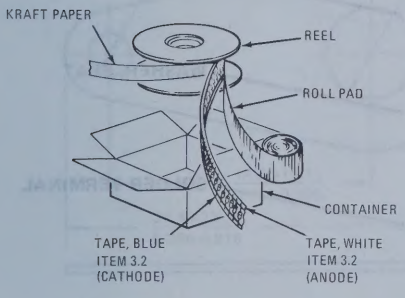


FIGURE 2 – COMPONENT SPACING

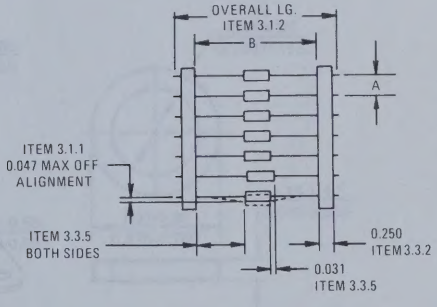


FIGURE 3 – REEL DIMENSIONS

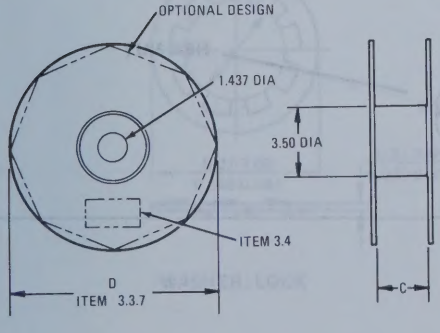
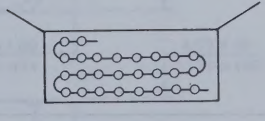
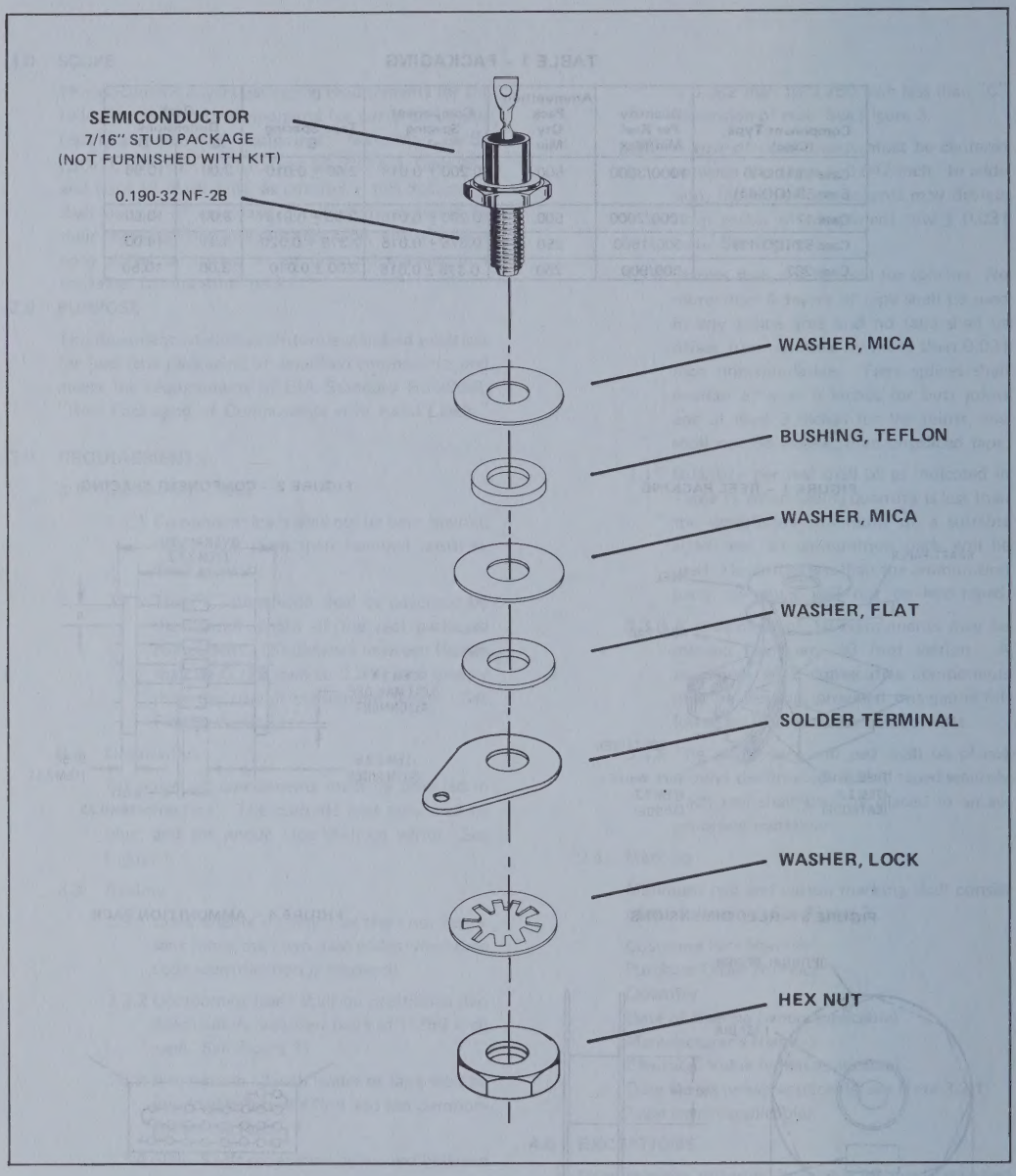


FIGURE 4 – AMMUNITION PACK

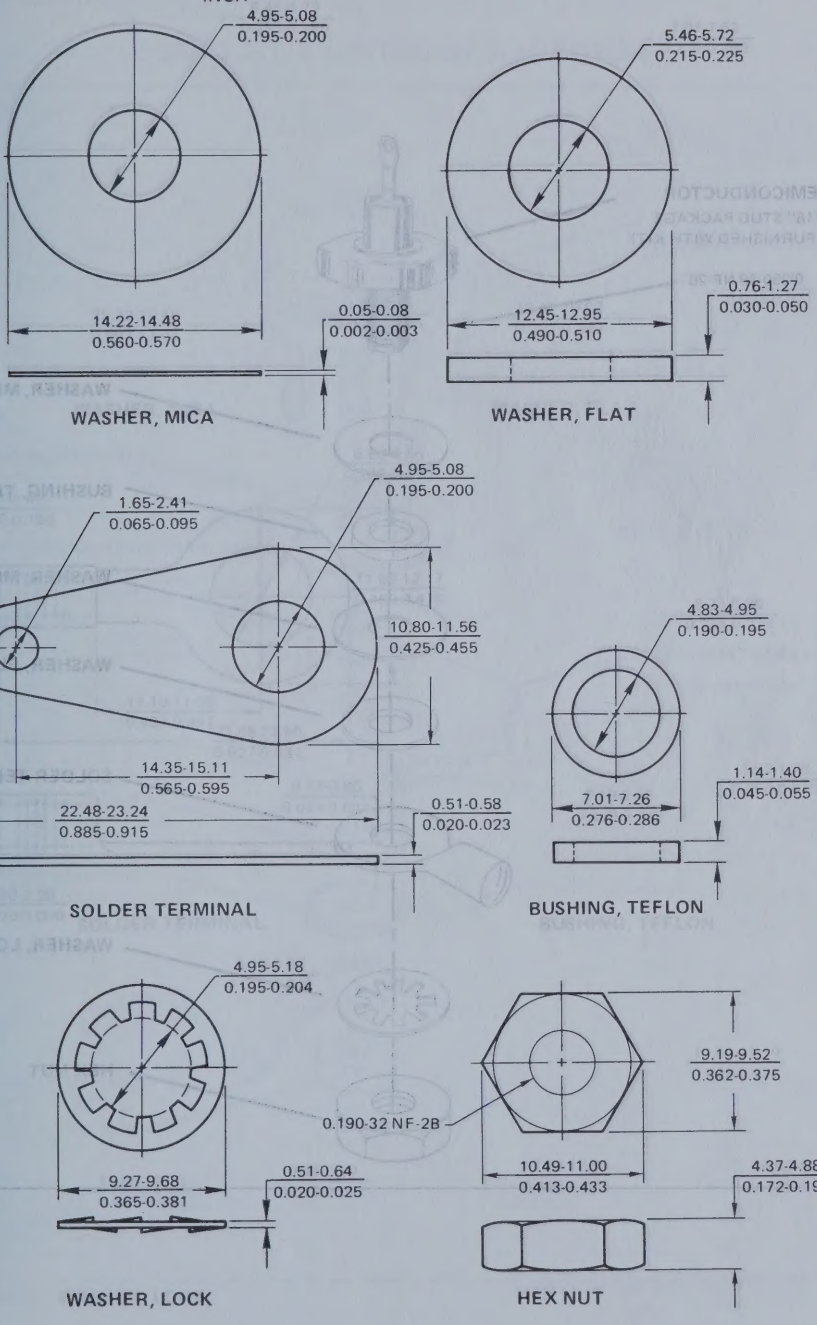


8

MOTOROLA MOUNTING KIT – 7/16" STUD PACKAGE

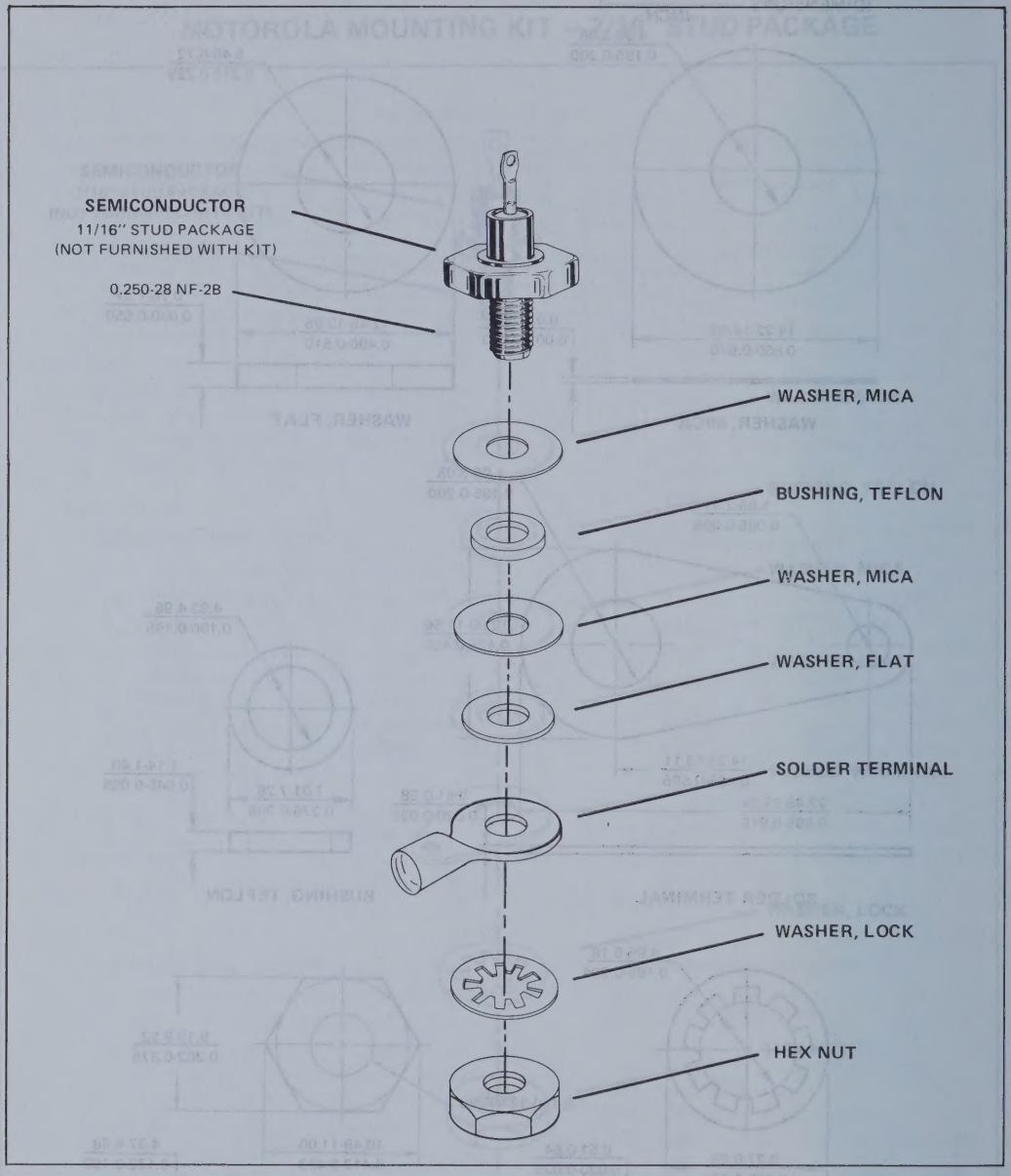


(DIMENSIONS — MILLIMETER / INCH)



8

MOTOROLA MOUNTING KIT – 11/16" STUD PACKAGES



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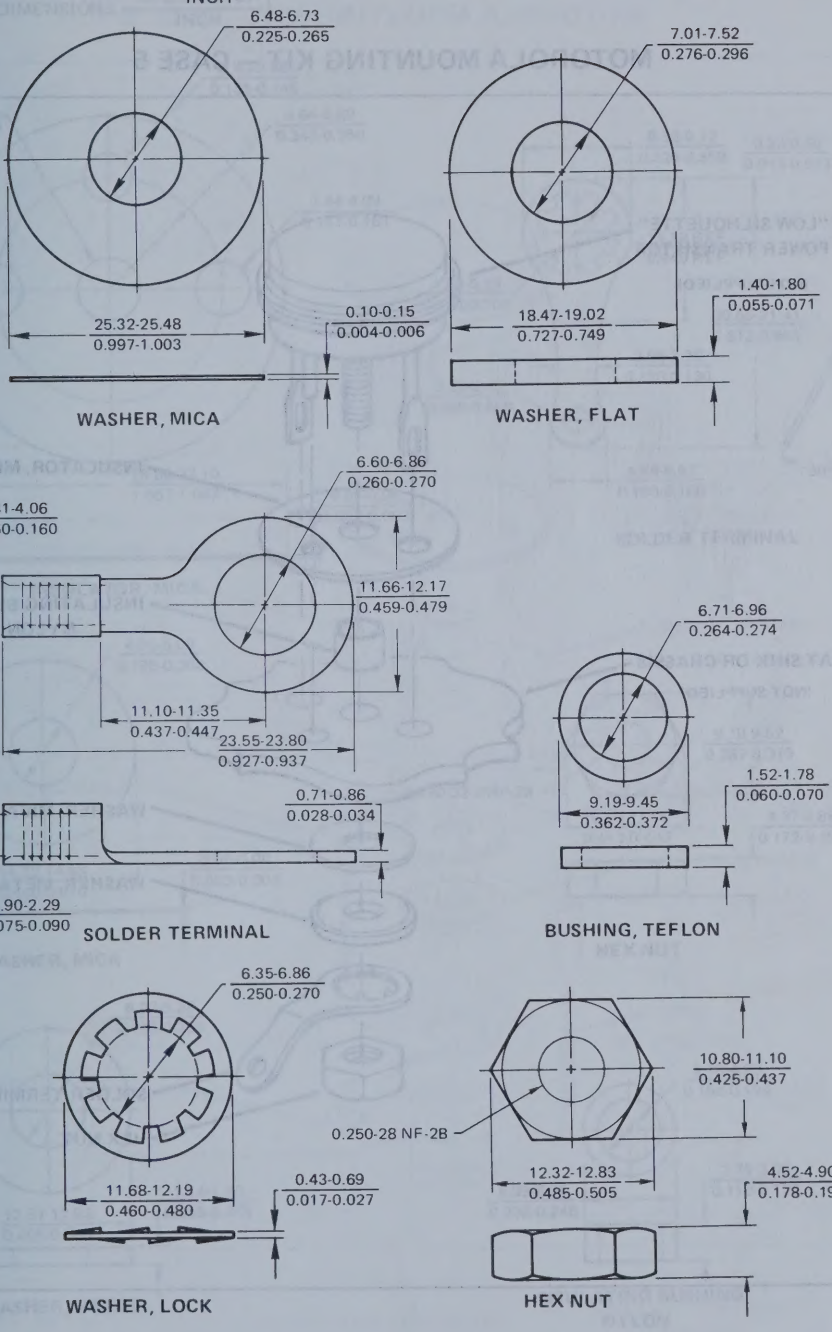
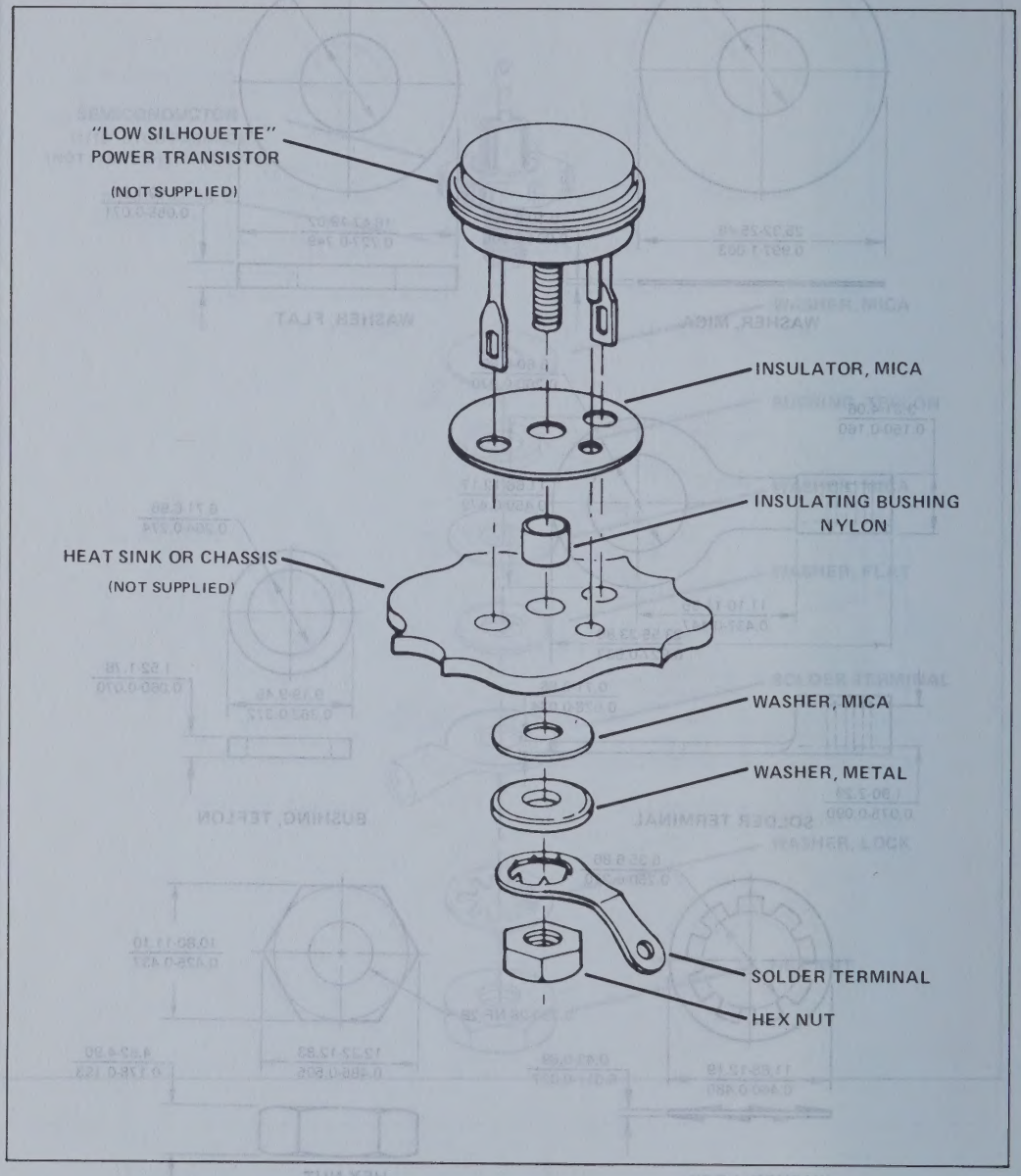


8

MOTOROLA MOUNTING KIT – CASE 5



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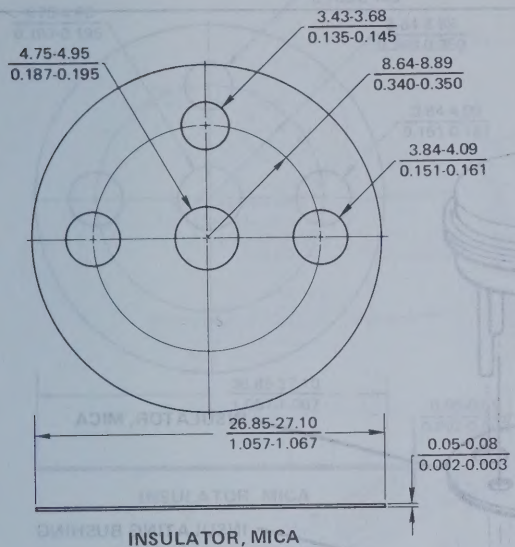
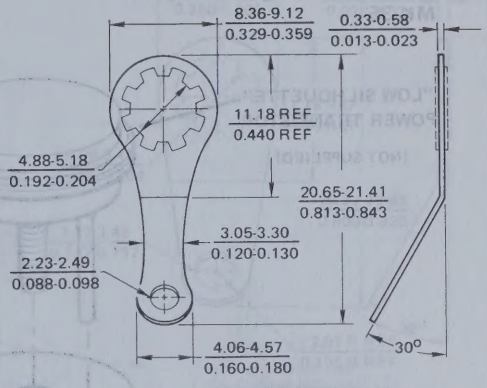
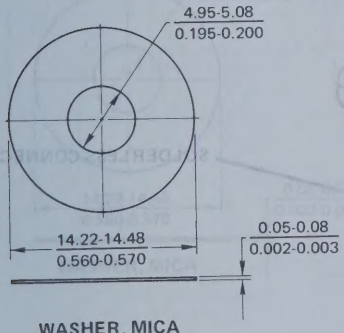


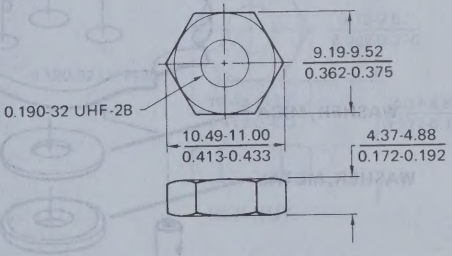
INSULATOR, MICA



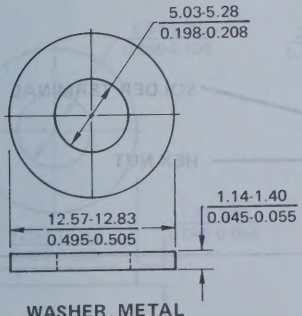
SOLDER TERMINAL



WASHER, MICA



HEX NUT



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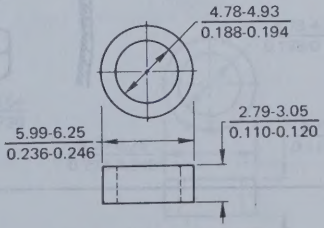
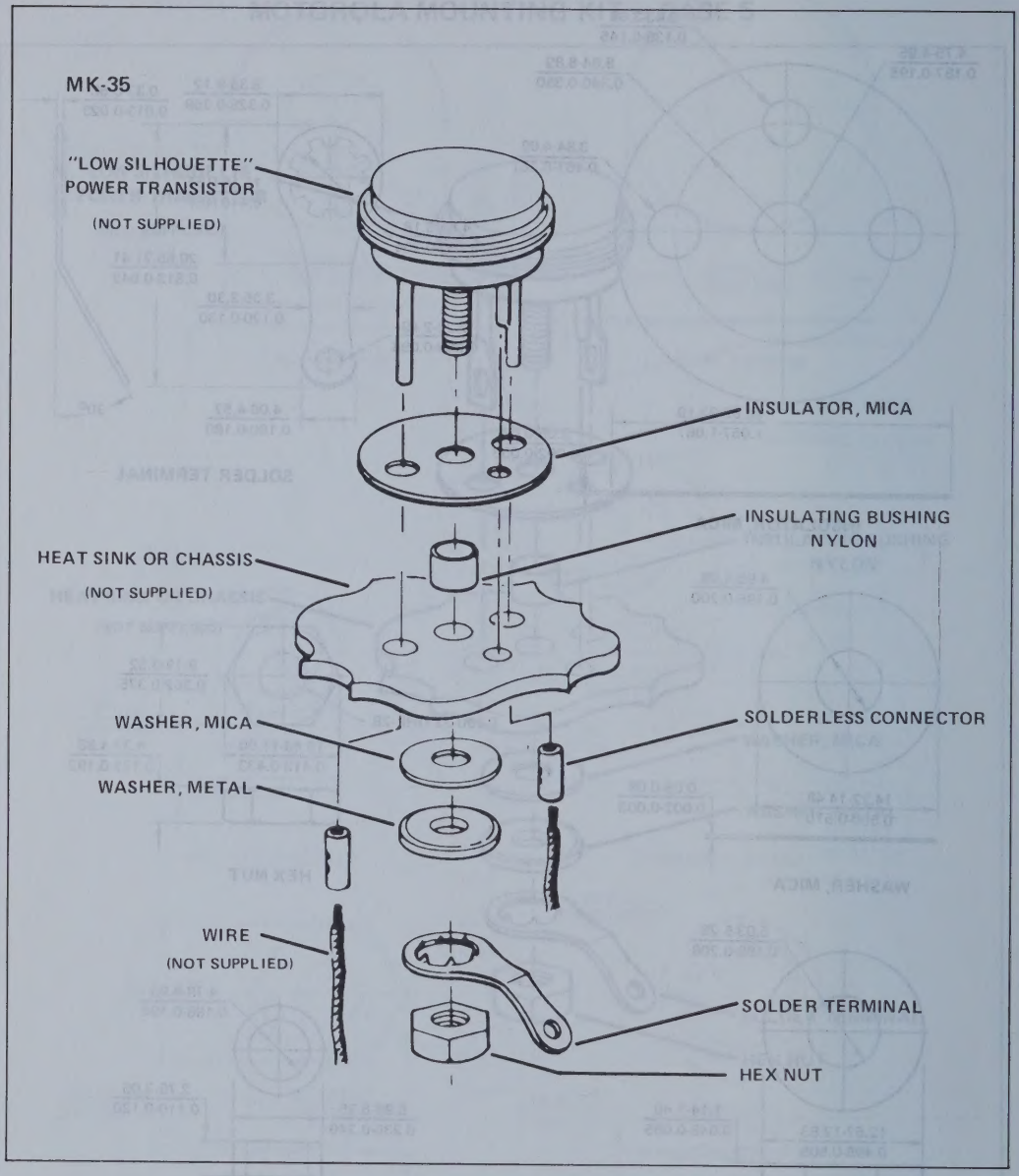
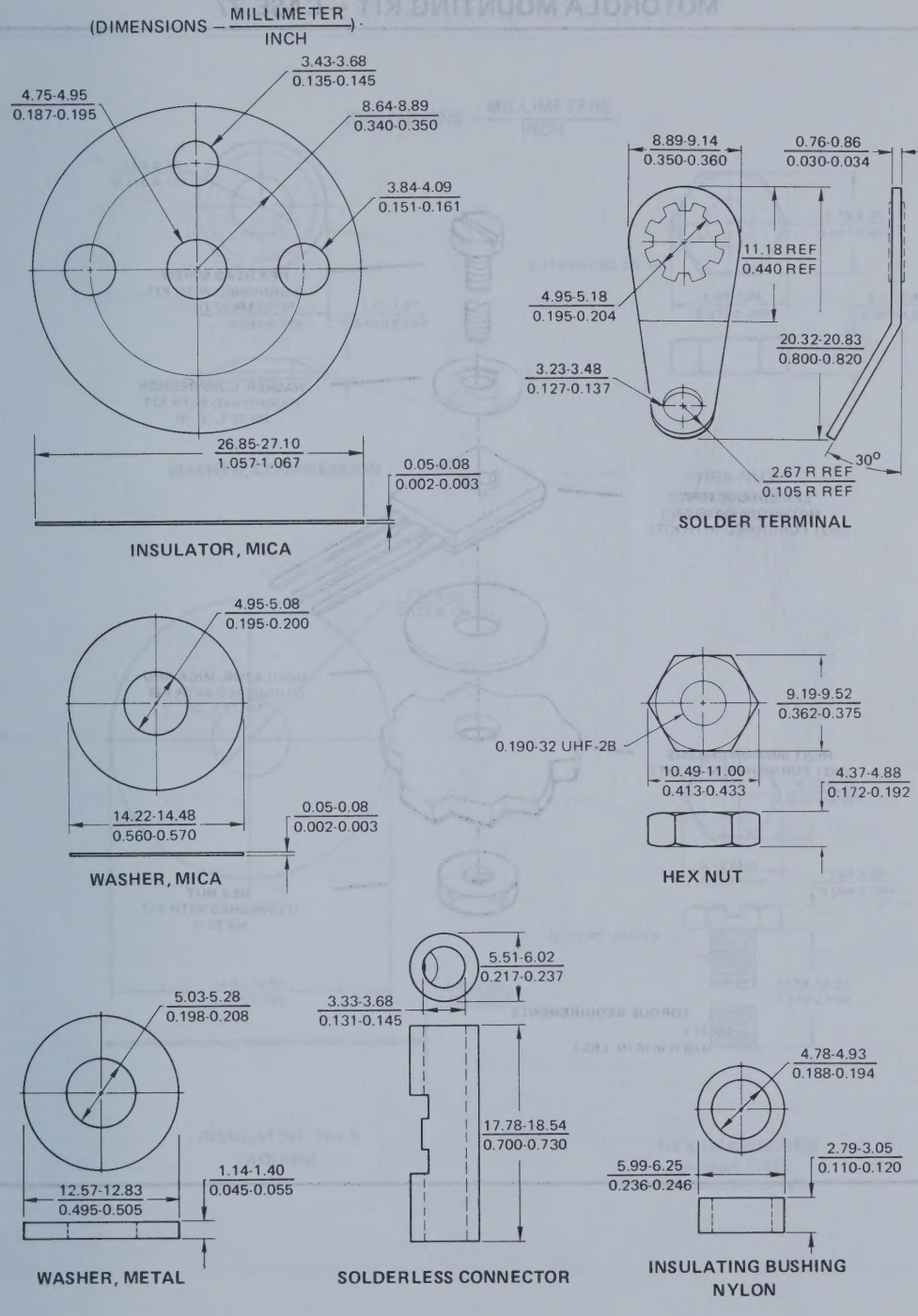


INSULATING BUSHING
NYLON

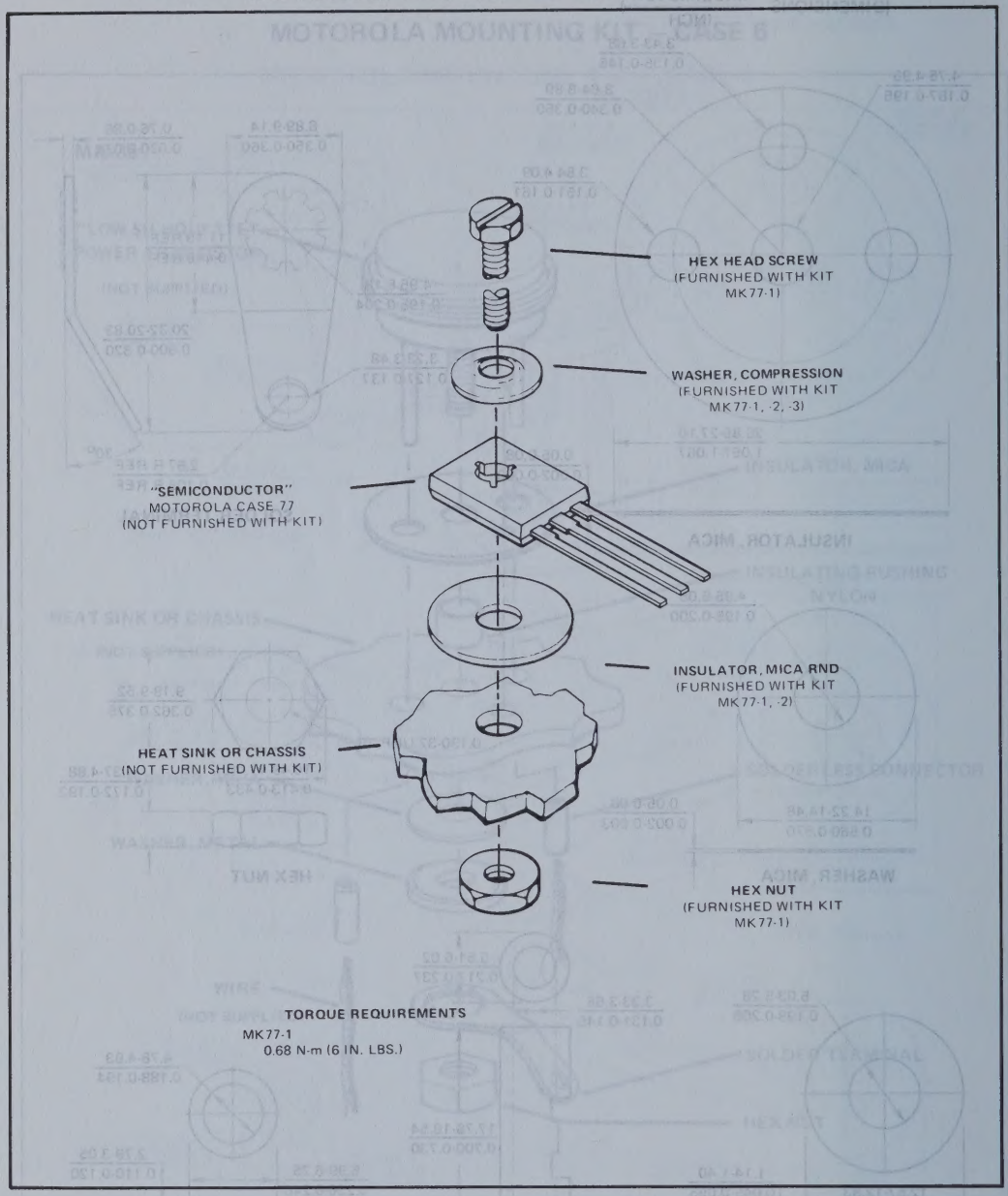
8

MOTOROLA MOUNTING KIT – CASE 6




(DIMENSIONS — MILLIMETER / INCH)
3.43-3.68
0.135-0.145
4.75-4.95
0.187-0.195
8.64-8.89
0.340-0.350
3.84-4.09
0.151-0.161
26.85-27.10
1.057-1.067
0.05-0.08
0.002-0.003
INSULATOR, MICA
8.89-9.14
0.350-0.360
0.76-0.86
0.030-0.034
11.18 REF
0.440 REF
4.95-5.18
0.195-0.204
20.32-20.83
0.800-0.820
3.23-3.48
0.127-0.137
30°
2.67 R REF
0.105 R REF
SOLDER TERMINAL
4.95-5.08
0.195-0.200
14.22-14.48
0.560-0.570
0.05-0.08
0.002-0.003
WASHER, MICA
0.190-32 UHF-2B
9.19-9.52
0.362-0.375
10.49-11.00
0.413-0.433
4.37-4.88
0.172-0.192
HEX NUT
5.03-5.28
0.198-0.208
12.57-12.83
0.495-0.505
1.14-1.40
0.045-0.055
WASHER, METAL
5.51-6.02
0.217-0.237
3.33-3.68
0.131-0.145
17.78-18.54
0.700-0.730
SOLDERLESS CONNECTOR
4.78-4.93
0.188-0.194
5.99-6.25
0.236-0.246
2.79-3.05
0.110-0.120
INSULATING BUSHING
NYLON

MOTOROLA MOUNTING KIT – CASE 77



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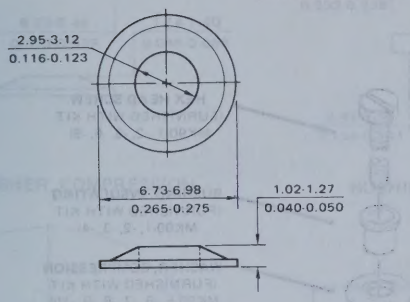
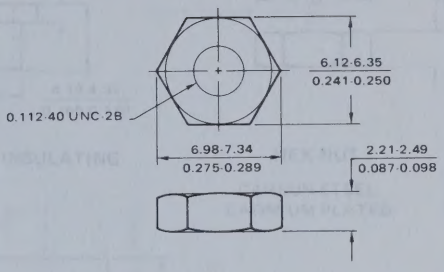
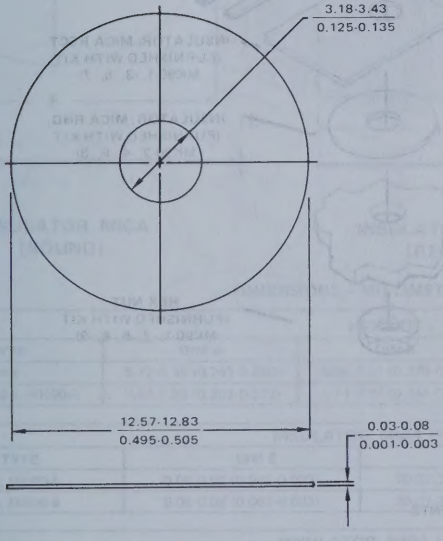


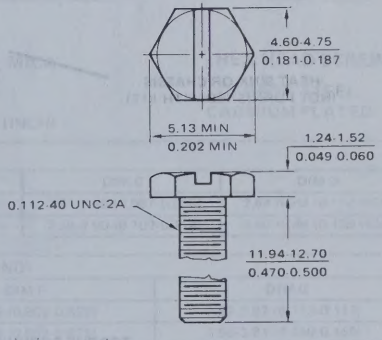
WASHER, COMPRESSION



HEX NUT
CARBON STEEL,
CADMIUM PLATED



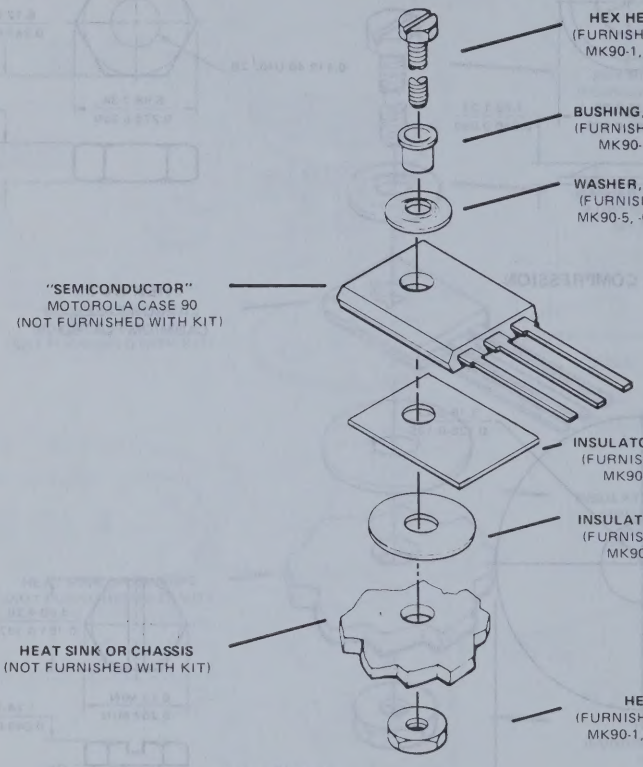
INSULATOR, MICA
[ROUND]



HEX HEAD SCREW
CARBON STEEL,
CADMIUM PLATED

8

MOTOROLA MOUNTING KIT – CASE 90



TORQUE REQUIREMENTS

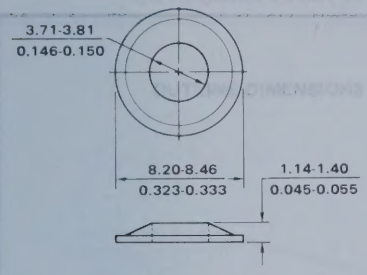
MK90-1, MK90-2
0.68 N-m (6 IN. LBS.) MAX

MK90-5, MK90-6, MK90-9
0.90 N-m (8 IN. LBS.) MAX

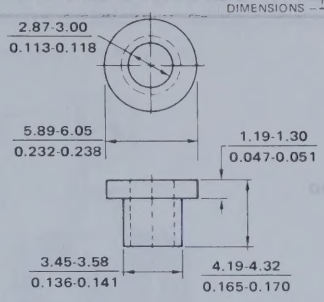
8

OUTLINE DIMENSIONS

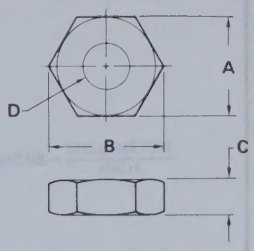
DIMENSIONS – MILLIMETER / INCH



WASHER, COMPRESSION

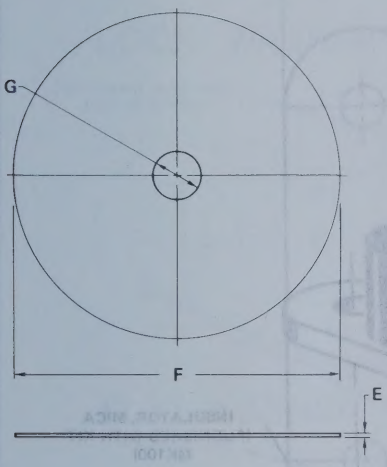


BUSHING, INSULATING

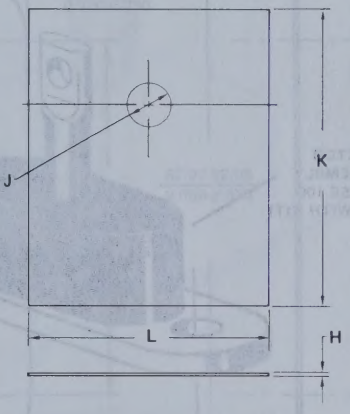


HEX NUT

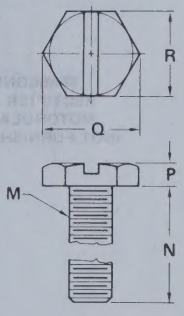
CARBON STEEL, CADMIUM PLATED



INSULATOR, MICA [ROUND]



INSULATOR, MICA [RECT]



HEX HEAD SCREW

CARBON STEEL, CADMIUM PLATED

DIMENSIONS – MILLIMETER (INCH)

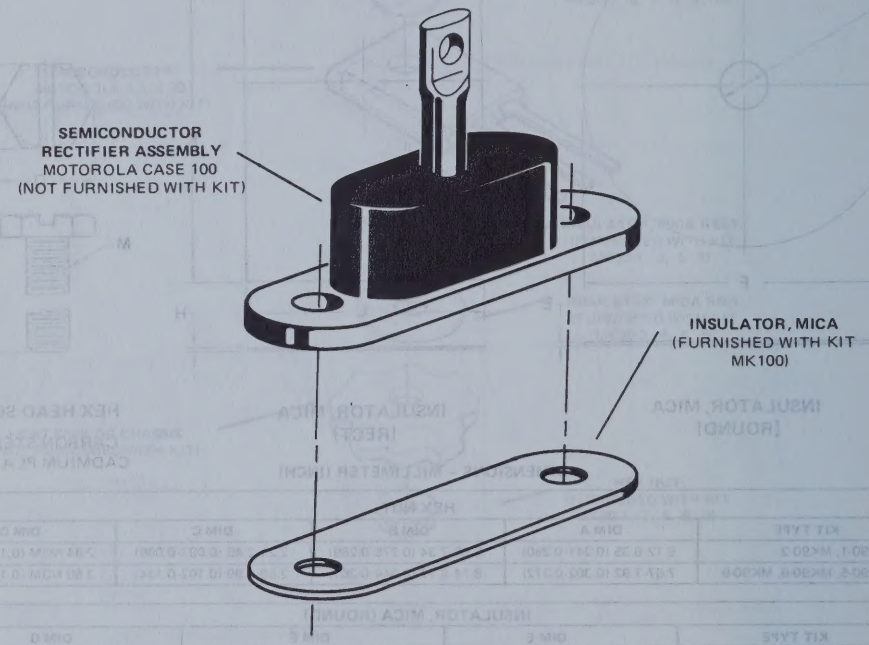
HEX NUT				
KIT TYPE	DIM A	DIM B	DIM C	DIM D
MK90-1, MK90-2	6.12-6.35 (0.241-0.250)	6.98-7.34 (0.275-0.289)	2.21-2.49 (0.087-0.098)	2.84 NOM (0.112 NOM)
MK90-5, MK90-6, MK90-9	7.67-7.92 (0.302-0.312)	8.74-9.17 (0.344-0.361)	2.59-2.90 (0.102-0.114)	3.50 NOM (0.138 NOM)

INSULATOR, MICA (ROUND)			
KIT TYPE	DIM E	DIM F	DIM G
MK90-2, MK90-4	0.05-0.08 (0.002-0.003)	20.37-20.88 (0.802-0.822)	2.87-2.97 (0.113-0.117)
MK90-6, MK90-8	0.05-0.08 (0.002-0.003)	20.37-20.88 (0.802-0.822)	3.56-3.81 (0.140-0.150)

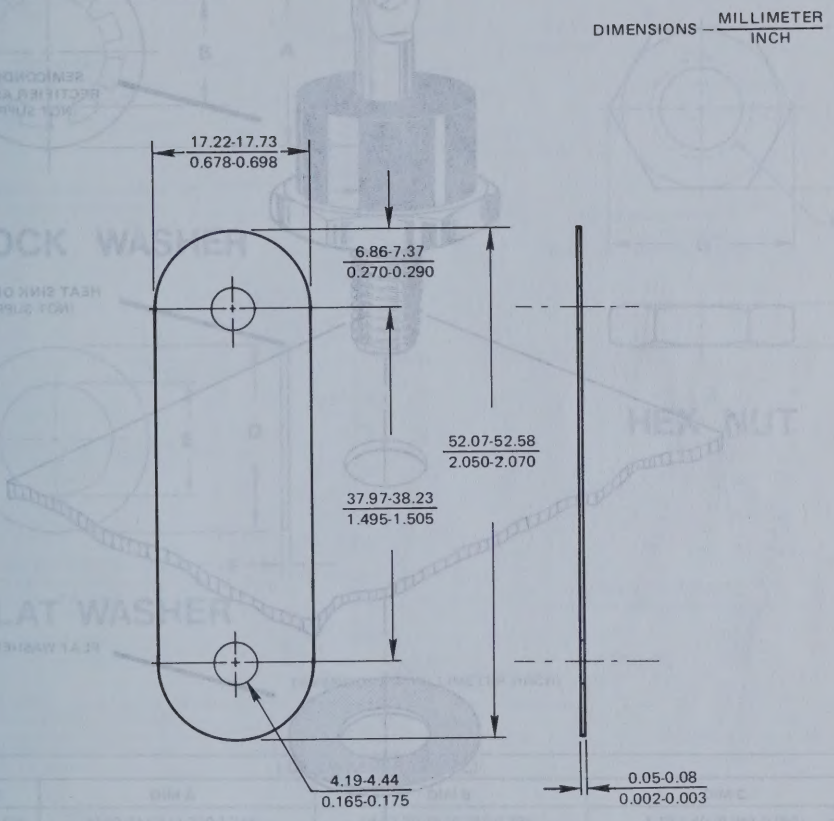
INSULATOR, MICA (RECT.)				
KIT TYPE	DIM H	DIM J	DIM K	DIM L
MK90-1, MK90-3	0.05-0.08 (0.002-0.003)	2.87-3.00 (0.113-0.118)	18.54-19.05 (0.730-0.750)	14.99-15.49 (0.590-0.610)
MK90-5, MK90-7	0.05-0.08 (0.002-0.003)	3.68-3.94 (0.145-0.155)	18.54-19.05 (0.730-0.750)	14.99-15.49 (0.590-0.610)

HEX HEAD SCREW					
KIT TYPE	DIM M	DIM N	DIM P	DIM Q	DIM R
MK90-1, MK90-2	0.112-40	11.94-12.70 (0.470-0.500)	1.24-1.52 (0.049-0.060)	5.13 MIN (0.202 MIN)	4.60-4.75 (0.181-0.187)
MK90-5, MK90-6, MK90-9	0.138-32	11.94-12.70 (0.470-0.500)	2.03-2.36 (0.080-0.093)	6.91 MIN (0.272 MIN)	6.20-6.35 (0.244-0.250)

MOTOROLA MOUNTING KIT – RECTIFIER ASSEMBLY



OUTLINE DIMENSIONS

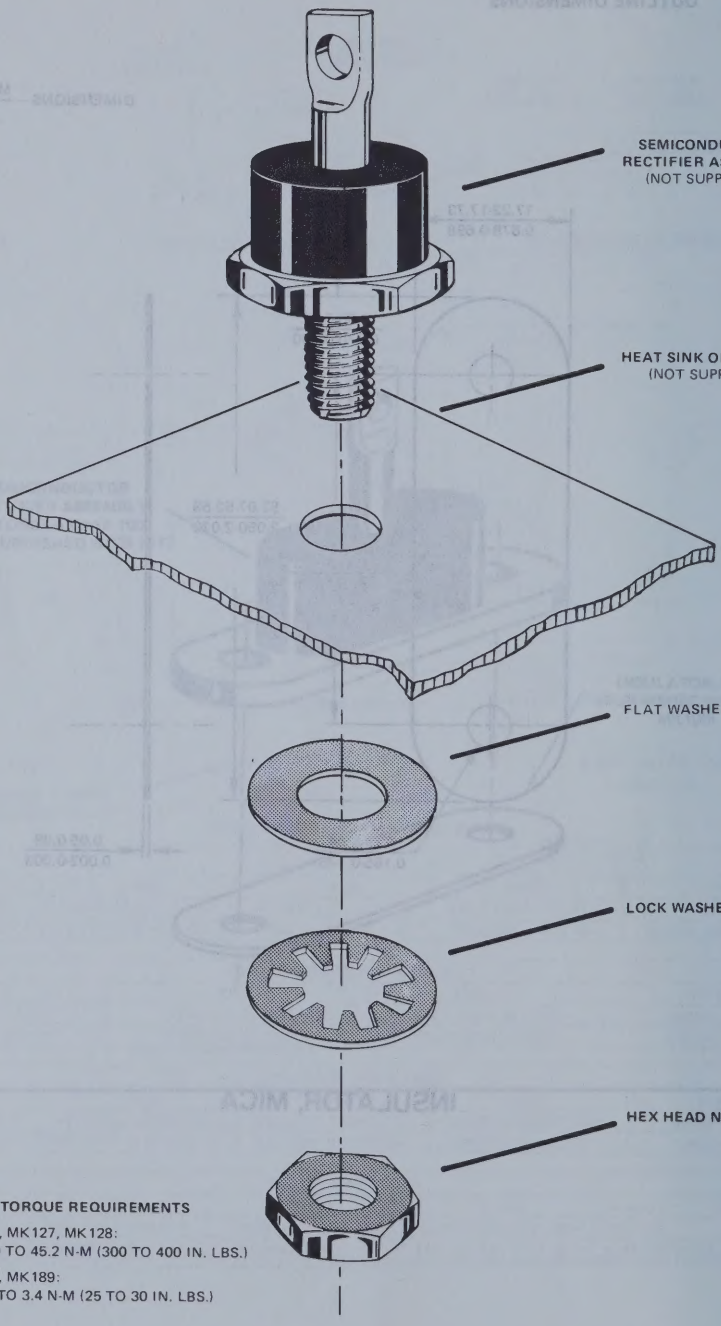


INSULATOR, MICA

8

MK126,MK127,MK128,MK167,MK189

MOTOROLA MOUNTING KIT – RECTIFIER ASSEMBLIES



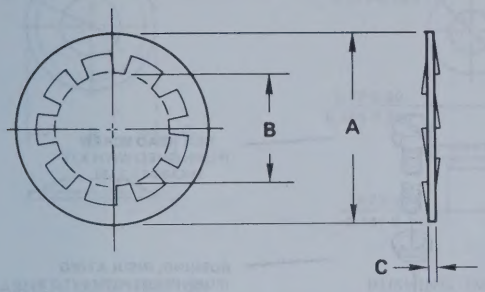
TORQUE REQUIREMENTS

MK126, MK127, MK128:
33.9 TO 45.2 N-M (300 TO 400 IN. LBS.)

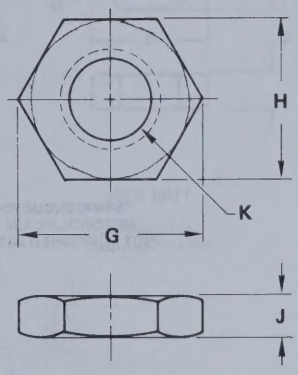
MK167, MK189:
2.8 TO 3.4 N-M (25 TO 30 IN. LBS.)

8

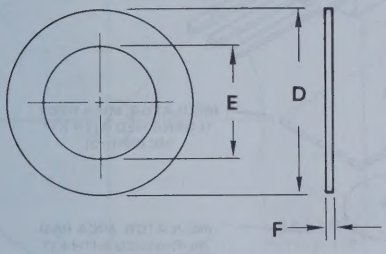
OUTLINE DIMENSIONS



LOCK WASHER



HEX NUT



FLAT WASHER

DIMENSIONS – MILLIMETER (INCH)

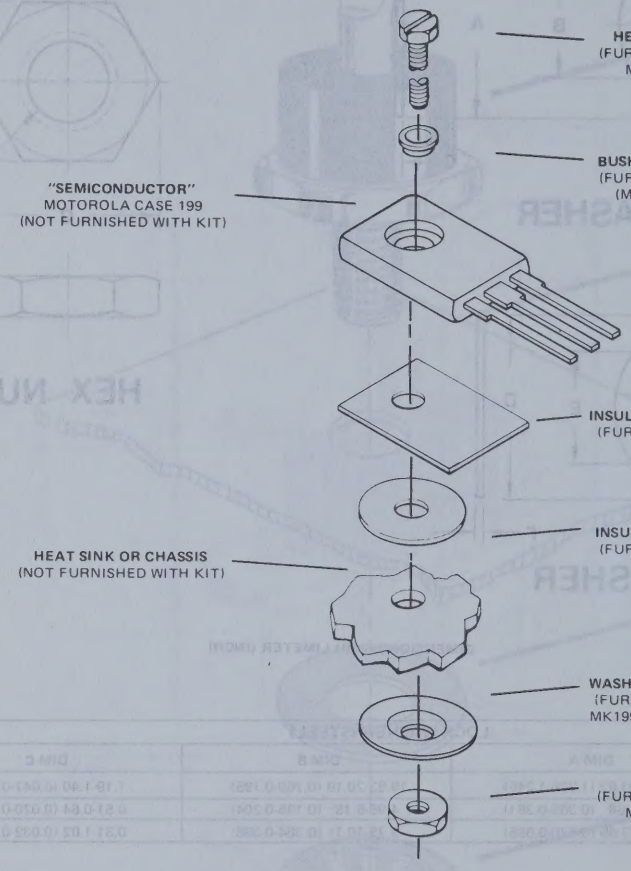
LOCK WASHER (STEEL)			
KIT TYPE	DIM A	DIM B	DIM C
MK126, 127, 128	30.99-31.62 (1.220-1.245)	19.53-20.19 (0.769-0.795)	1.19-1.40 (0.047-0.055)
MK167	9.27-9.68 (0.365-0.381)	4.95-5.18 (0.195-0.204)	0.51-0.64 (0.020-0.025)
MK189	17.02-17.65 (0.670-0.695)	9.75-10.11 (0.384-0.398)	0.81-1.02 (0.032-0.040)

FLAT WASHER (STEEL)			
KIT TYPE	DIM D	DIM E	DIM F
MK126, 127, 128	37.85-38.35 (1.490-1.510)	20.37-20.88 (0.802-0.822)	2.79-3.30 (0.110-0.130)
MK167	12.45-12.95 (0.490-0.510)	5.46-5.72 (0.215-0.225)	0.76-1.27 (0.030-0.050)
MK189	20.32-20.83 (0.800-0.820)	10.06-10.57 (0.396-0.416)	1.27-1.78 (0.050-0.070)

HEX NUT				
KIT TYPE	DIM G	DIM H	DIM J	DIM K
MK126, 127, 128	31.50-32.99 (1.240-1.299)	27.64-28.58 (1.088-1.125)	10.11-11.33 (0.398-0.446)	0.750-16 NF 2B
MK167	10.49-11.00 (0.413-0.433)	9.19-9.52 (0.362-0.375)	4.37-4.88 (0.172-0.192)	0.190-32 NF 2B
MK189	15.95-16.51 (0.628-0.650)	14.00-14.27 (0.551-0.562)	5.11-6.02 (0.201-0.237)	0.375-24 NF 2B

MK199-1 thru MK199-6

MOTOROLA MOUNTING KIT – CASE 199



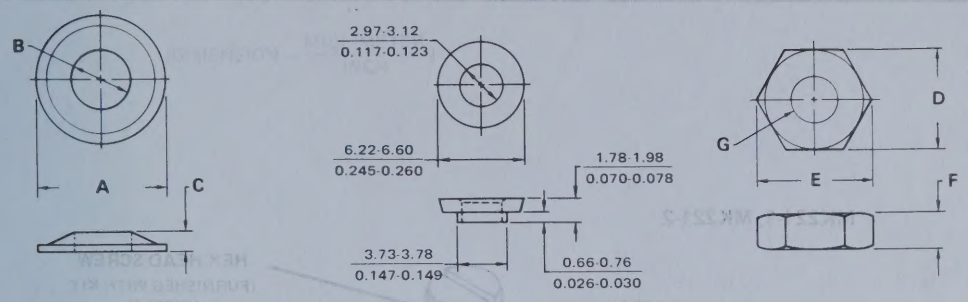
TORQUE REQUIREMENTS

MK199-1, MK199-2
0.68 N-m (6 IN. LBS.) MAX

MK199-5
0.90 N-m (8 IN. LBS.) MAX

8

(DIMENSIONS — MILLIMETERS / INCH)

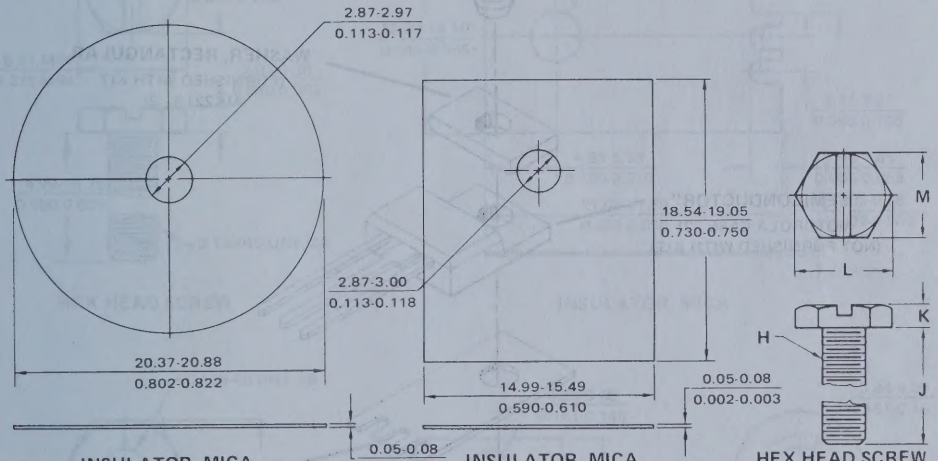


WASHER, COMPRESSION

BUSHING, INSULATING

HEX NUT

CARBON STEEL
CADMIUM PLATED



INSULATOR, MICA [ROUND]

INSULATOR, MICA [RECT]

HEX HEAD SCREW

CARBON STEEL
CADMIUM PLATED

DIMENSIONS – MILLIMETER (INCH)

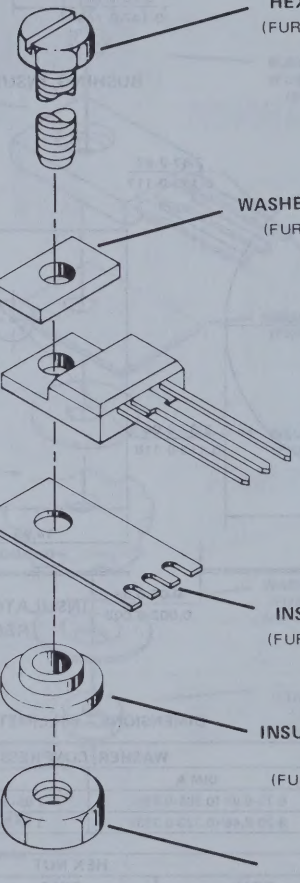
WASHER, COMPRESSION			
KIT TYPE	DIM A	DIM B	DIM C
MK199-1 thru -4	6.73-6.98 (0.265-0.275)	2.95-3.12 (0.116-0.123)	1.02-1.27 (0.040-0.050)
MK199-5, MK199-6	8.20-8.46 (0.323-0.333)	3.71-3.81 (0.146-0.150)	1.41-1.40 (0.045-0.055)

HEX NUT				
KIT TYPE	DIM D	DIM E	DIM F	DIM G
MK199-1, MK199-2	6.12-6.35 (0.241-0.250)	6.98-7.34 (0.275-0.289)	2.21-2.49 (0.087-0.098)	2.84 NOM (0.112 NOM)
MK199-5	7.67-7.92 (0.302-0.312)	8.74-9.17 (0.344-0.361)	2.59-2.90 (0.102-0.114)	3.50 NOM (0.138 NOM)

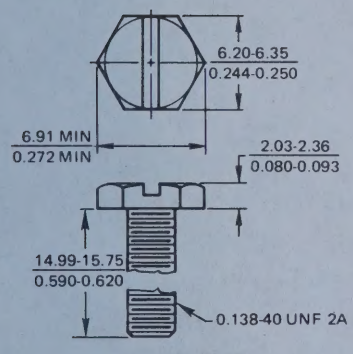
HEX HEAD SCREW					
KIT TYPE	DIM H	DIM J	DIM K	DIM L	DIM M
MK199-1, MK199-2	0.112-40	11.94-12.70 (0.470-0.500)	1.24-1.52 (0.049-0.060)	5.13 MIN (0.202 MIN)	4.60-4.75 (0.181-0.187)
MK199-5	0.138-32	11.94-12.70 (0.470-0.500)	2.03-2.36 (0.080-0.093)	6.91 MIN (0.272 MIN)	6.20-6.35 (0.244-0.250)

MOTOROLA MOUNTING KIT – CASE 221

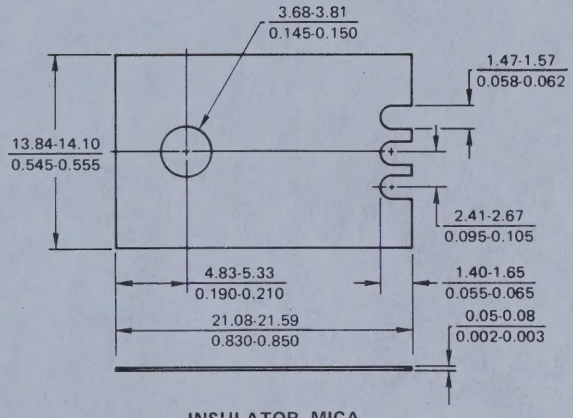
MK221-1, MK221-2



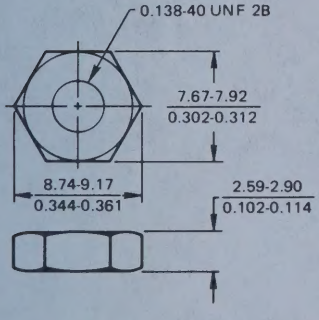
(DIMENSION – $\frac{\text{MILLIMETER}}{\text{INCH}}$)



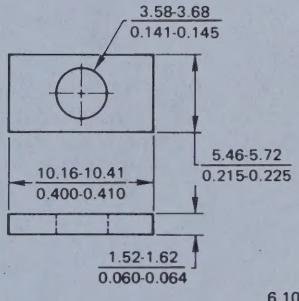
HEX HEAD SCREW



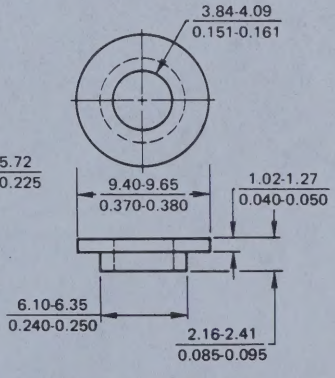
INSULATOR, MICA



HEX NUT



WASHER, RECTANGULAR

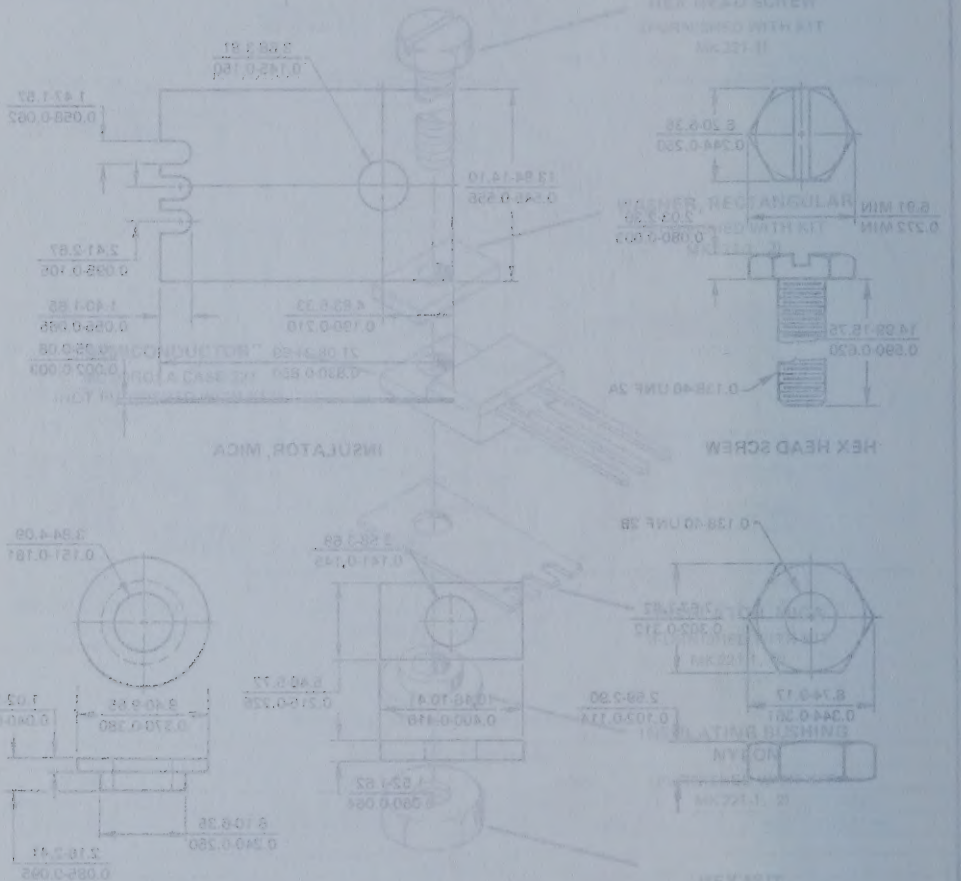


INSULATING BUSHING
NYLON

8

MK221-1,MK221-2

MOTOROLA MOUNTING KIT — CASE 221



Outline Dimensions

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MOTOROLA CASE NUMBER CROSS REFERENCE

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Case 7-02	TO-68
Case 8-01	–
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Case 11-01	–
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Case 11A-01	–
Case 12-01	–
Case 17-02	–
Case 20-03	TO-72
Case 21-02	TO-17
Case 22-03	TO-18
Case 22A-01	–
Case 23-03	TO-107
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Case 26-03	TO-46
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Case 29-02	TO-92
Case 29A-02	–
Case 31-01	–
Case 31-03	TO-5
Case 31A-01	–
Case 34A-01	TO-12
Case 36-03	TO-60
Case 41-01/10	–
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Case 43-02	DO-21
Case 43-04	–
Case 44-02	DO-4
Case 45-01	–
Case 46-01	–
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Case 48-01	–
Case 51-02	DO-7
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Case 55-01	–
Case 56-02	DO-4
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Case 58-01	–
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Case 59-03	DO-41
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Case 63-02	–
Case 70-01	–
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Case 82-01	–
Case 85-01	–
Case 85L-02	–
Case 86-01	–
Case 86L-02	–
Case 87L-01	–
Case 88L-01	–
Case 90-05	–
Case 100-01	–
Case 105-01	–
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Case 107-01	–
Case 108-01	–
Case 109-02	–
Case 110-01	–
Case 111-01	–
Case 112-03	–
Case 116-02	–
Case 117-01	–
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Case 136-01	–
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Case 138-01	–
Case 144B-03	–
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Case 145C-01	–
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Case 154-01	–
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Case 155A-01	–
Case 156-01	–
Case 156A-01	–
Case 157-01	–
Case 157A-01	–
Case 159-02	–
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Case 161-01	–
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Case 167-01	–

MOTOROLA CASE NUMBER CROSS REFERENCE (continued)

Case 168-01	–
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Case 179-02	–
Case 180-01	–
Case 181-02	–
Case 182-02	TO-92
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Case 183-01	–
Case 184-01	–
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Case 190-01	–
Case 193-03	–
Case 194-01	–
Case 197-01	–
Case 198-01	–
Case 199-04	–
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Case 206-02	–
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Case 207A-01	–
Case 209-01	–
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Case 257-01	DO-5
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Case 262-02	–
Case 264-01	–
Case 267-01	–
Case 270-02	–
Case 270A-01	–
Case 271-02	–
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Case 278-04	–
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Case 296-03	–
Case 297-01	–
Case 298-01	–
Case 298-02	–
Case 601-04	–
Case 602A-03	–
Case 602B-03	–
Case 603-04	TO-100
Case 606-04	TO-91
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Case 607-05	–
Case 608-02	TO-90
Case 609-02	TO-85
Case 610A-03	–
Case 614-02	–
Case 617-04	–
Case 619-02	–
Case 620-02	–
Case 620-04	–
Case 621	–
Case 623-01	–
Case 626-03	–
Case 627-02	–
Case 631-01	–
Case 632-02	TO-116
Case 632-03	–
Case 632-04	–
Case 641A-02	–
Case 642-02	TO-76
Case 643A-02	–
Case 644A-02	–
Case 645-02	–
Case 646-03	–
Case 647-03	–
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Case 649-03	–
Case 650-02	–
Case 652-02	–
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Case 663-02	–
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Case 673-04	–
Case 675-02	–
Case 676-02	–
Case 677-03	–
Case 680-03	–
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Case 690-03	–
Case 690-04	–
Case 690-05	–
Case 694-03	–
Case 695-04	–
Case 699-03	–
Case 700-02	–
Case 702-01	

REGISTERED CASE NUMBER CROSS REFERENCE

DO-4	Case 44-02	TO-60	Case 36-03
	Case 56-02	TO-61	Case 9-01
DO-5	Case 42A-01	TO-63	Case 188-01
	Case 257-01	TO-66	Case 80-02
DO-7	Case 51-02	TO-68	Case 7-02
DO-13	Case 52-03	TO-71	Case 655-01
DO-14	Case 146-01	TO-72	Case 20-03
DO-21	Case 43-02	TO-76	Case 642-02
DO-41	Case 59-01	TO-83	Case 246-01
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TO-3	Case 1-03	TO-91	Case 606-04
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TO-17	Case 21-02	TO-94	Case 219-01
TO-18	Case 22-03	TO-100	Case 603-04
TO36	Case 5-03	TO-102	Case 24-02
TO-39	Case 79-02	TO107	Case 23-03
TO-41	Case 161	TO-116	Case 632-02
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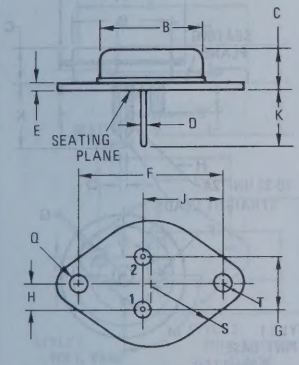
TO-52	Case 27-02	TO 220AB	Case 221-02
TO-59	Case 160-03		

CASE OUTLINE DIMENSIONS

CASE 1-03 TO-3



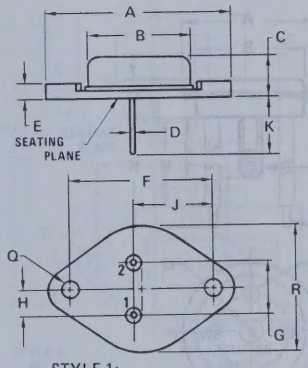
STYLE 1:
PIN 1. BASE
2. EMITTER
CASE-COLLECTOR

STYLE 2:
PIN 1. BASE
2. COLLECTOR
CASE-EMITTER

DIM	MILLIMETERS MIN	MILLIMETERS MAX	INCHES MIN	INCHES MAX
B	—	22.23	—	0.875
C	6.35	11.43	0.250	0.450
D	0.97	1.09	0.038	0.043
E	—	3.43	—	0.135
F	29.90	30.40	1.177	1.197
G	10.67	11.18	0.420	0.440
H	5.21	5.72	0.205	0.225
J	16.64	17.15	0.655	0.675
K	7.92	—	0.312	—
Q	3.84	4.09	0.151	0.161
S	—	13.34	—	0.525
T	—	4.78	—	0.188

All JEDEC dimensions and notes apply

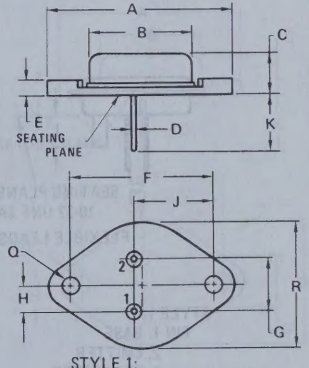
CASE 3-01



STYLE 1:
PIN 1. BASE
2. EMITTER
CASE - COLLECTOR

DIM	MILLIMETERS MIN	MILLIMETERS MAX	INCHES MIN	INCHES MAX
A	38.86	39.37	1.530	1.550
B	20.57	21.08	0.810	0.830
C	–	9.14	–	0.360
D	1.22	1.32	0.048	0.052
E	3.18	3.43	0.125	0.135
F	29.90	30.40	1.177	1.197
G	10.67	11.18	0.420	0.440
H	5.33	5.59	0.210	0.220
J	16.64	17.15	0.655	0.675
K	8.13	10.67	0.320	0.420
Q	3.84	4.09	0.151	0.161
R	26.16	26.67	1.030	1.050

CASE 3-04

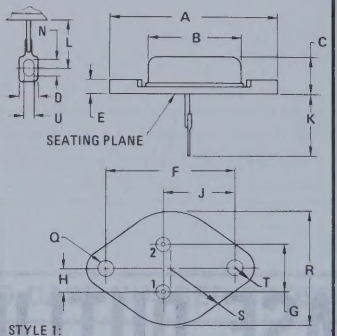


STYLE 1:
PIN 1. BASE
2. EMITTER
CASE. COLLECTOR

DIM	MILLIMETERS MIN	MILLIMETERS MAX	INCHES MIN	INCHES MAX
A	–	39.37	–	1.550
B	–	21.08	–	0.830
C	–	9.14	–	0.360
D	1.52	1.65	0.060	0.065
E	–	3.43	–	0.135
F	29.90	30.40	1.177	1.197
G	10.67	11.18	0.420	0.440
H	5.33	5.59	0.210	0.220
J	16.64	17.15	0.655	0.675
K	15.49	18.03	0.610	0.710
Q	3.84	4.09	0.151	0.161
R	–	26.67	–	1.050

9

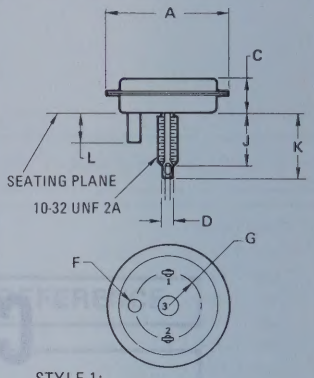
CASE 4-04



STYLE 1:
PIN 1. BASE
2. EMITTER
CASE - COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	39.37	–	1.550
B	–	21.08	–	0.830
C	–	7.62	–	0.300
D	4.32	4.83	0.170	0.190
E	–	3.43	–	0.135
F	29.90	30.40	1.177	1.197
G	10.67	11.18	0.420	0.440
H	5.33	5.59	0.210	0.220
J	16.64	17.15	0.655	0.675
K	–	17.27	–	0.680
N	3.30	4.32	0.130	0.170
Q	3.84	4.09	0.151	0.161
R	–	26.67	–	1.050
U	2.03	3.05	0.080	0.120

CASE 5-03 TO-36

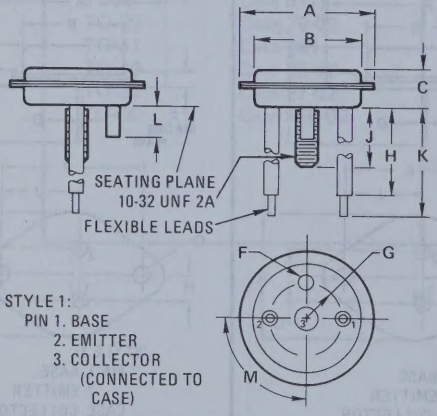


STYLE 1:
PIN 1. BASE
2. EMITTER
3. COLLECTOR
(CONNECTED TO CASE)

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	31.75	–	1.250
C	–	13.21	–	0.520
D	–	4.83	–	0.190
F	–	3.56	–	0.140
G	8.76 NOM		0.345 NOM	
J	9.53	12.70	0.375	0.500
K	15.49	18.03	0.610	0.710
L	–	7.92	–	0.312

All JEDEC dimensions and notes apply

CASE 6-01

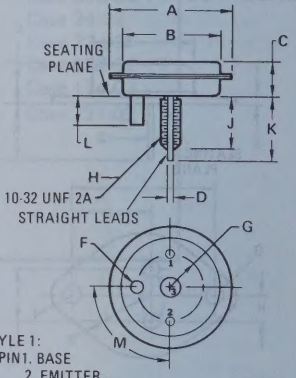


STYLE 1:
PIN 1. BASE
2. EMITTER
3. COLLECTOR
(CONNECTED TO CASE)

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	33.35	–	1.313
B	–	25.53	–	1.005
C	–	15.88	–	0.625
F	–	3.58	–	0.141
G	8.76 BSC		0.345 BSC	
H	28.58	34.93	1.125	1.375
J	9.53	12.70	0.375	0.500
K	38.10	–	1.500	–
L	2.54	7.92	0.100	0.312
M	90° BSC		90° BSC	

NOTES:
1. "F" – INSULATED LOCATOR PIN.
2. DIM "G" IS PIN CIRCLE RAD MEASURED AT THE SEATING PLANE
3. PINS 1,2 & "F" TO BE WITHIN 0.51 mm (0.020) DIA OF TRUE POSITION WITH RESPECT TO STUD (PIN 3) (MAJOR DIA).
4. FLEXIBLE LEADS ARE MAX DIA OF 1.65 mm (0.065).

CASE 7-02 TO-68

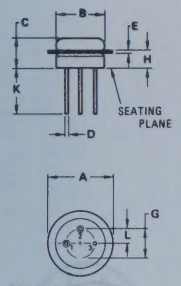


STYLE 1:
PIN1. BASE
2. EMITTER
3. COLLECTOR
(CONNECTED TO CASE)

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	31.75	–	1.250
B	25.15	–	0.990	–
C	6.99	12.70	0.275	0.500
D	1.02	2.41	0.040	0.095
F	2.29	3.56	0.090	0.140
G	8.51	9.02	0.335	0.355
H	4.212	4.310	0.1658	0.1697
J	9.52	12.70	0.375	0.500
K	15.49	18.03	0.610	0.710
L	2.54	7.92	0.100	0.312
M	85°	90°	85°	95°

All JEDEC dimensions and notes apply.

CASE 8-01

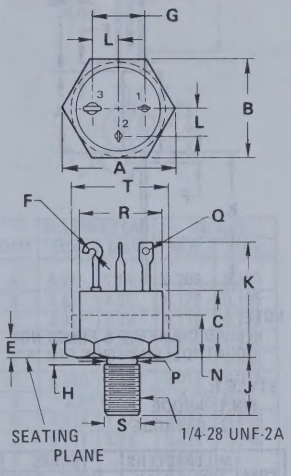


STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR

NOTE:
1. LEADS WITHIN 0.13 mm (0.005) RAD OF TRUE POSITION AT SEATING, AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	14.86	16.51	0.585	0.650
B	12.32	12.57	0.485	0.495
C	6.10	7.62	0.240	0.300
D	0.69	0.84	0.027	0.033
E	0.51	1.02	0.020	0.040
G	7.16 BSC		0.282 BSC	
H	4.19	4.70	0.165	0.185
K	9.14	11.18	0.360	0.440
L	3.58 BSC		0.141 BSC	

CASE 9-01 TO-61

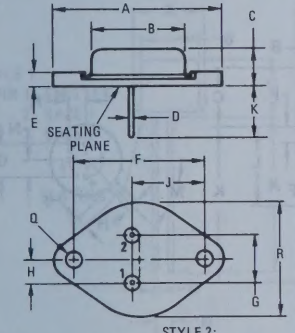


STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	19.30	20.07	0.760	0.790
B	16.94	17.45	0.667	0.687
C	8.26	11.68	0.325	0.460
E	2.29	3.81	0.090	0.150
F	1.17	1.96	0.046	0.077
G	8.64	10.54	0.340	0.415
H	–	2.29	–	0.090
J	10.72	11.56	0.422	0.455
K	16.26	22.23	0.640	0.875
L	4.32	5.41	0.170	0.213
N	–	6.86	–	0.270
P	5.59	6.32	0.220	0.249
Q	1.19	1.83	0.047	0.072
R	14.48	15.49	0.570	0.610
S	5.651	5.761	0.2225	0.2268
T	15.49	17.45	0.610	0.687

Collector connected to case
All JEDEC dimensions and notes apply

CASE 11-01



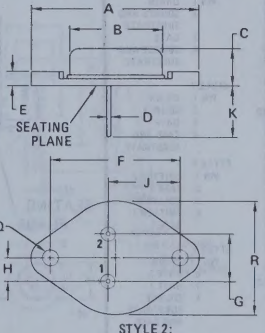
STYLE 1:
PIN 1. BASE
2. EMITTER
CASE: COLLECTOR

STYLE 2:
PIN 1. EMITTER
2. BASE
CASE: COLLECTOR
NOTE:
1. DIM "Q" IS DIA.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	39.37	–	1.550
B	–	21.08	–	0.830
C	6.35	7.62	0.250	0.300
D	0.99	1.09	0.039	0.043
E	–	3.43	–	0.135
F	29.90	30.40	1.177	1.197
G	10.67	11.18	0.420	0.440
H	5.33	5.59	0.210	0.220
J	16.64	17.15	0.655	0.675
K	11.18	12.19	0.440	0.480
Q	3.84	4.09	0.151	0.161
R	–	26.67	–	1.050

Collector connected to case.

CASE 11-03

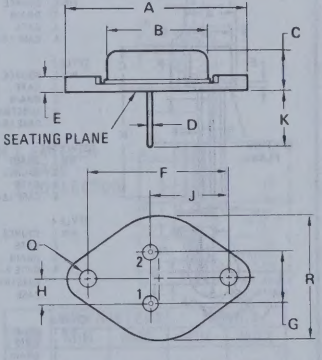


STYLE 1:
PIN 1. BASE
2. EMITTER
CASE: COLLECTOR

STYLE 2:
PIN 1. EMITTER
2. BASE
CASE: COLLECTOR
NOTE:
1. DIM "Q" IS DIA.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	39.37	–	1.550
B	–	22.23	–	0.875
C	6.35	11.43	0.250	0.450
D	0.97	1.09	0.038	0.043
E	–	3.43	–	0.135
F	29.90	30.40	1.177	1.197
G	10.67	11.18	0.420	0.440
H	5.21	5.72	0.205	0.225
J	16.64	17.15	0.655	0.675
K	11.18	12.19	0.440	0.480
Q	3.84	4.09	0.151	0.161
R	–	26.67	–	1.050

CASE 11A-01



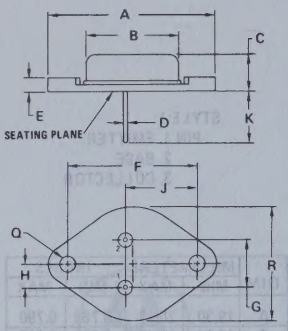
STYLE 1:
PIN 1. BASE
2. EMITTER
CASE: COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	39.37	–	1.550
B	–	21.08	–	0.830
C	–	7.62	–	0.300
D	1.22	1.32	0.048	0.052
E	–	3.43	–	0.135
F	29.90	30.40	1.177	1.197
G	10.67	11.18	0.420	0.440
H	5.33	5.59	0.210	0.220
J	16.64	17.15	0.655	0.675
K	8.13	10.67	0.320	0.420
Q	3.84	4.09	0.151	0.161
R	–	26.67	–	1.050

Collector connected to case

9

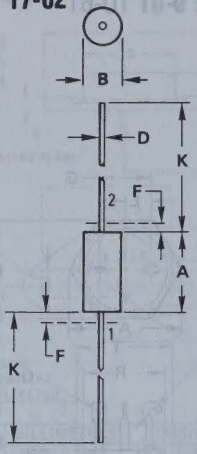
CASE 12-01



STYLE 1:
PIN 1. BASE
2. EMITTER
CASE – COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	39.37	–	1.550
B	–	21.08	–	0.830
C	–	7.62	–	0.300
D	1.22	1.32	0.048	0.052
E	–	3.43	–	0.135
F	29.90	30.40	1.177	1.197
G	10.67	11.18	0.420	0.440
H	5.21	5.72	0.205	0.225
J	16.64	17.15	0.655	0.675
K	11.18	12.19	0.440	0.480
Q	3.84	4.09	0.151	0.161
R	–	26.67	–	1.050

CASE 17-02

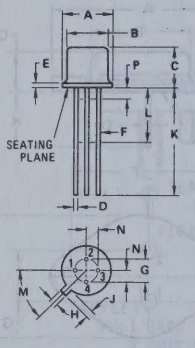


NOTE:
1. LEAD DIAMETER & FINISH NOT CONTROLLED WITHIN DIM "F".

STYLE 1:
PIN 1. ANODE
2. CATHODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.38	8.89	0.330	0.350
B	3.30	3.68	0.130	0.145
D	0.94	1.09	0.037	0.043
F	–	1.27	–	0.050
K	25.40	31.75	1.000	1.250

CASE 20-03 TO-72



STYLE 1
PIN 1. SOURCE
2. DRAIN
3. GATE
4. CASE LEAD

STYLE 2
PIN 1. SOURCE
2. GATE
3. DRAIN
4. SUBSTRATE AND CASE LEAD

STYLE 3
PIN 1. DRAIN
2. SOURCE
3. GATE
4. CASE LEAD

STYLE 4
PIN 1. SOURCE
2. GATE
3. DRAIN
4. GATE 2 – SUBSTRATE AND CASE

STYLE 5
PIN 1. SOURCE
2. GATE 1
3. DRAIN
4. CASE

STYLE 6
PIN 1. DRAIN
2. SOURCE AND SUBSTRATE
3. GATE
4. SOURCE AND SUBSTRATE

STYLE 7
PIN 1. DRAIN
2. SOURCE
3. GATE
4. CASE AND SUBSTRATE

STYLE 8
PIN 1. EMITTER 2
2. BASE 1
3. COLLECTOR
4. EMITTER 1 BASE 2

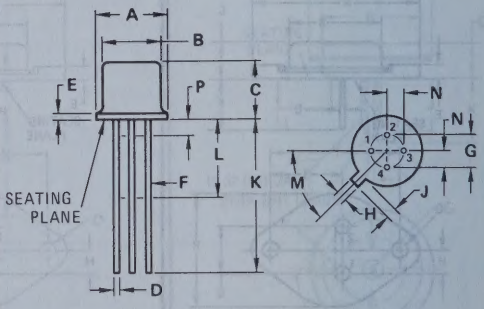
STYLE 9
PIN 1. DRAIN
2. GATE 2
3. GATE 1
4. SOURCE, SUBSTRATE AND CASE

STYLE 10
PIN 1. EMITTER
2. BASE
3. COLLECTOR
4. CASE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.31	5.84	0.209	0.230
B	4.52	4.95	0.178	0.195
C	4.32	5.33	0.170	0.210
D	0.41	0.53	0.016	0.021
E	–	0.76	–	0.030
F	0.41	0.48	0.016	0.019
G	2.54 BSC		0.100 BSC	
H	0.91	1.17	0.036	0.046
J	0.71	1.22	0.028	0.048
K	12.70	–	0.500	–
L	6.35	–	0.250	–
M	45° BSC		45° BSC	
N	1.27 BSC		0.050 BSC	
P	–	1.27	–	0.050

ALL JEDEC dimensions and notes apply

CASE 21-02 TO-17



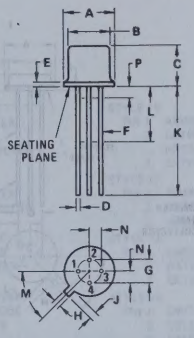
STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR
4. SHIELD

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.70	5.46	0.185	0.215
B	3.81	4.27	0.150	0.168
C	4.19	5.33	0.165	0.210
D	0.406	0.533	0.016	0.021
E	–	0.762	–	0.030
F	0.406	0.483	0.016	0.019
G	1.80 BSC		0.071 BSC	
H	0.762	1.14	0.030	0.045
J	0.711	1.22	0.028	0.048
K	12.70	–	0.500	–
L	6.35	–	0.250	–
M	45° BSC		45° BSC	
N	0.914 BSC		0.036 BSC	
P	–	1.27	–	0.050

All JEDEC dimensions and notes apply

9

CASE 22-03 TO-18



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.31	5.84	0.209	0.230
B	4.52	4.95	0.178	0.195
C	4.32	5.33	0.170	0.210
D	0.406	0.533	0.016	0.021
E	–	0.762	–	0.030
F	0.406	0.483	0.016	0.019
G	2.54 BSC		0.100 BSC	
H	0.914	1.17	0.036	0.046
J	0.711	1.22	0.028	0.048
K	12.70	–	0.500	–
L	6.35	–	0.250	–
M	45° BSC		45° BSC	
N	1.27 BSC		0.050 BSC	
P	–	1.27	–	0.050

All JEDEC notes and dimensions apply.

STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR

STYLE 2:
PIN 1. SOURCE,SUBSTRATE AND CASE
2. GATE
3. DRAIN

STYLE 3:
PIN 1. SOURCE
2. DRAIN
3. GATE

STYLE 4:
PIN 1. SOURCE
2. DRAIN
3. GATE &CASE

STYLE 5:
PIN 1. EMITTER
2. BASE 1
3. BASE 2

STYLE 6:
PIN 1. CATHODE
2. GATE
3. ANODE

STYLE 7:
PIN 1. ANODE
2. BASE
3. CATHODE

STYLE 8:
PIN 1. GATE
2. ANODE 1
3. ANODE 2

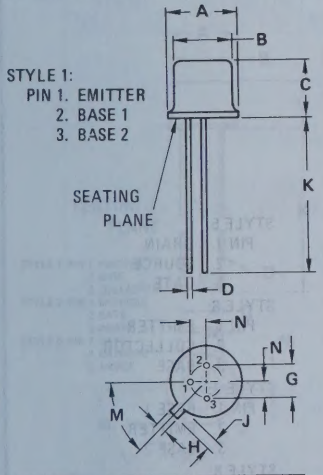
STYLE 9:
PIN 1. ANODE 2
2. ANODE 1
3. GATE
(CONNECTED TO CASE)

STYLE 10:
PIN 1. BASE
2. EMITTER
3. BASE

STYLE 11:
PIN 1. DRAIN
2. GATE
3. SOURCE, SUBSTRATE

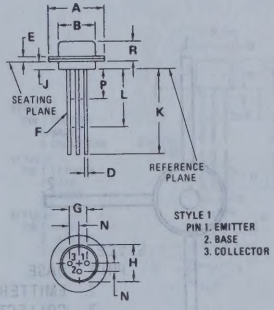
CASE 22A-01

STYLE 1:
PIN 1. EMITTER
2. BASE 1
3. BASE 2



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.31	5.84	0.209	0.230
B	4.52	4.95	0.178	0.195
C	4.32	5.33	0.170	0.210
D	0.41	0.48	0.016	0.019
G	2.54 TYP		0.100 TYP	
H	0.91	1.17	0.036	0.046
J	0.71	1.22	0.028	0.048
K	12.70	–	0.500	–
M	45° TYP		45° TYP	
N	1.27 TYP		0.050 TYP	

CASE 23-03 TO-107

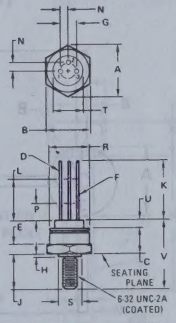


DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.13	8.89	0.320	0.350
B	5.08	5.46	0.200	0.215
D	0.407	0.533	0.016	0.021
E	–	0.76	–	0.030
F	0.407	0.482	0.016	0.019
G	2.54 BSC		0.100 BSC	
H	4.07	4.32	0.160	0.170
J	1.15	1.52	0.045	0.060
K	12.70	–	0.500	–
L	6.35	–	0.250	–
N	1.27 BSC		0.050 BSC	
P	–	1.27	–	0.050
R	2.67	3.42	0.105	0.135

All JEDEC dimensions and notes apply

CASE 24-02 TO-102

PIN 1. EMITTER
2. BASE
3. COLLECTOR

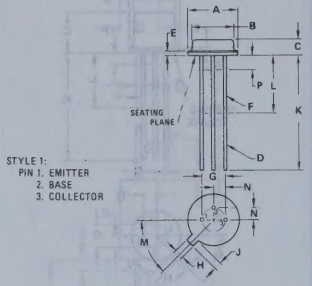


DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	10.49	11.00	0.413	0.433
B	9.19	9.53	0.362	0.375
C	5.33	5.72	0.210	0.225
D	0.406	0.533	0.016	0.021
E	1.65	1.78	0.065	0.070
F	0.406	0.483	0.016	0.019
G	2.54 BSC		0.100 BSC	
H	0.508	0.889	0.020	0.035
J	6.73	7.42	0.265	0.292
K	12.70	–	0.500	–
L	6.35	–	0.250	–
N	1.27 BSC		0.050 BSC	
P	–	1.27	–	0.050
R	8.89	9.14	0.350	0.360
S	4.45	4.83	0.175	0.190
T	4.11	4.29	0.162	0.169
U	1.14	1.52	0.045	0.060

All JEDEC dimensions and notes apply

9

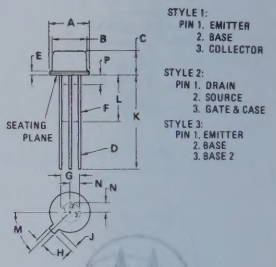
CASE 26-03 TO-46



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.31	5.84	0.209	0.230
B	4.52	4.95	0.178	0.195
C	1.65	2.16	0.065	0.085
D	0.406	0.533	0.016	0.021
E	–	1.02	–	0.040
F	0.305	0.483	0.012	0.019
G	2.54 BSC		0.100 BSC	
H	0.914	1.17	0.036	0.046
J	0.711	1.22	0.028	0.048
K	12.70	–	0.500	–
L	6.35	–	0.250	–
M	45° BSC		45° BSC	
N	1.27 BSC		0.050 BSC	
P	–	1.27	–	0.050

All JEDEC dimensions and notes apply

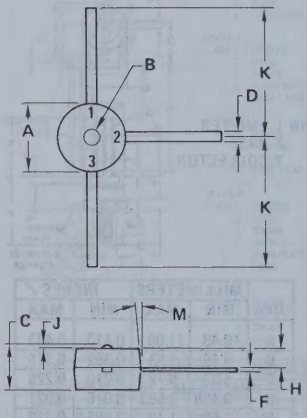
CASE 27-02 TO-52



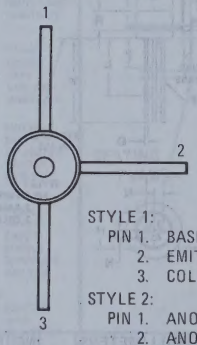
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.31	5.84	0.209	0.230
B	4.52	4.95	0.178	0.195
C	2.92	3.81	0.115	0.150
D	–	0.533	–	0.021
E	–	0.762	–	0.030
F	0.406	0.483	0.016	0.019
G	2.54 BSC		0.100 BSC	
H	0.914	1.17	0.036	0.046
J	0.711	1.22	0.028	0.048
K	12.70	–	0.500	–
L	6.35	–	0.250	–
M	45° BSC		45° BSC	
N	1.27 BSC		0.050 BSC	
P	–	1.27	–	0.050

All JEDEC dimensions and notes apply

CASE 28-01



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.98	2.34	0.078	0.092
B	0.38	0.64	0.015	0.025
C	1.24	1.55	0.049	0.061
D	0.25	0.41	0.010	0.016
F	0.10	0.15	0.004	0.006
H	0.51	0.76	0.020	0.030
J	0.03	0.08	0.001	0.003
K	4.19	4.45	0.165	0.175
M	3°	7°	3°	7°



STYLE 1:
PIN 1. BASE
2. EMITTER
3. COLLECTOR

STYLE 2:
PIN 1. ANODE 2
2. ANODE 1
3. CATHODE

STYLE 3:
PIN 1. CATHODE 2
2. CATHODE 1
3. ANODE

STYLE 4:
PIN 1. CATHODE
2. ANODE
3. COMMON CATHODE ANODE

STYLE 5:
PIN 1. DRAIN
2. SOURCE
3. GATE

STYLE 6:
PIN 1. EMITTER
2. COLLECTOR
3. BASE

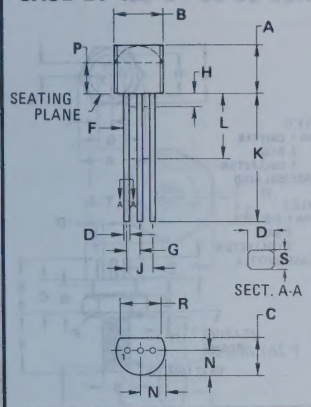
STYLE 7:
PIN 1. BASE 1
2. EMITTER
3. BASE 2

STYLE 8:
PIN 1. CATHODE
2. GATE
3. ANODE

STYLE 9:
PIN 1. SOURCE
2. GATE
3. DRAIN

9

CASE 29-02 TO-92



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.32	5.33	0.170	0.210
B	4.44	5.21	0.175	0.205
C	3.18	4.19	0.125	0.165
D	0.41	0.56	0.016	0.022
F	0.41	0.48	0.016	0.019
G	1.14	1.40	0.045	0.055
H	–	2.54	–	0.100
J	2.41	2.67	0.095	0.105
K	12.70	–	0.500	–
L	6.35	–	0.250	–
N	2.03	2.92	0.080	0.115
P	2.92	–	0.115	–
R	3.43	–	0.135	–
S	0.36	0.41	0.014	0.016

All JEDEC dimensions and notes apply.

STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR

STYLE 2:
PIN 1. BASE
2. EMITTER
3. COLLECTOR

STYLE 3:
PIN 1. ANODE
2. ANODE
3. CATHODE

STYLE 4:
PIN 1. CATHODE
2. CATHODE
3. ANODE

STYLE 5:
PIN 1. DRAIN
2. SOURCE
3. GATE

STYLE 6:
PIN 1. GATE
2. SOURCE & SUBSTRATE
3. DRAIN

STYLE 7:
PIN 1. SOURCE
2. DRAIN
3. GATE

STYLE 8:
PIN 1. DRAIN
2. GATE
3. SOURCE & SUBSTRATE

STYLE 9:
PIN 1. BASE 1
2. EMITTER
3. BASE 2

STYLE 10:
PIN 1. CATHODE
2. GATE
3. ANODE

STYLE 11:
PIN 1. ANODE
2. CATHODE & ANODE
3. CATHODE

STYLE 12:
PIN 1. MAIN TERMINAL 1
2. GATE
3. MAIN TERMINAL 2

STYLE 13:
PIN 1. ANODE 1
2. GATE
3. CATHODE 2

STYLE 14:
PIN 1. EMITTER
2. COLLECTOR
3. BASE

STYLE 15:
PIN 1. ANODE 1
2. CATHODE
3. ANODE 2

STYLE 16:
PIN 1. ANODE
2. GATE
3. CATHODE

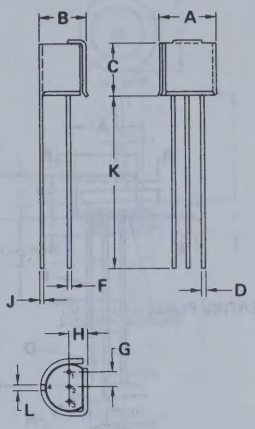
STYLE 17:
PIN 1. COLLECTOR
2. BASE
3. EMITTER

STYLE 18:
PIN 1. ANODE
2. CATHODE
3. NOT CONNECTED

STYLE 19:
PIN 1. GATE
2. ANODE
3. CATHODE

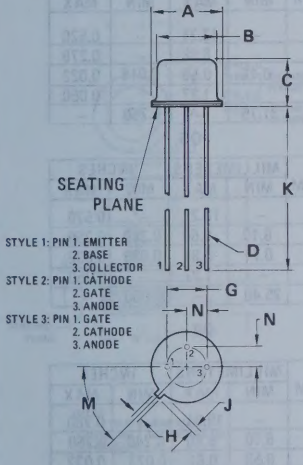
STYLE 20:
PIN 1. N.C.
2. CATHODE
3. ANODE

CASE 29A-02



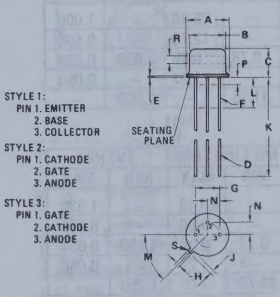
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.03	5.18	0.198	0.204
B	4.01	4.27	0.158	0.168
C	4.44	4.70	0.175	0.185
D	0.41	0.48	0.016	0.019
F	0.25	0.38	0.010	0.015
G	1.14	1.40	0.045	0.055
H	1.40	1.65	0.055	0.065
J	0.23	0.28	0.009	0.011
K	12.70	–	0.500	–
L	0.33	0.38	0.013	0.015

CASE 31-01



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.51	9.40	0.335	0.370
B	7.75	8.51	0.305	0.335
C	6.10	6.60	0.240	0.260
D	0.41	0.48	0.016	0.019
G	5.08 BSC		0.200 BSC	
H	0.71	0.86	0.028	0.034
J	0.74	1.14	0.029	0.045
K	38.10	–	1.500	–
M	45° BSC		45° BSC	
N	2.54 BSC		0.100 BSC	

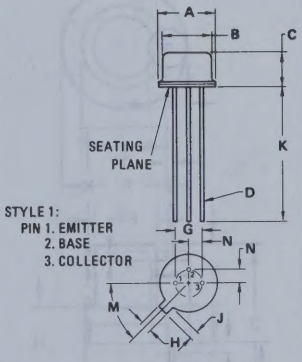
CASE 31-03 TO-5



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.51	9.40	0.335	0.370
B	7.75	8.51	0.305	0.335
C	6.10	6.60	0.240	0.260
D	0.406	0.533	0.016	0.021
E	0.229	3.18	0.009	0.125
F	0.406	0.483	0.016	0.019
G	5.08 BSC		0.200 BSC	
H	0.711	0.864	0.028	0.034
J	0.734	1.14	0.029	0.045
K	38.10	–	1.500	–
L	6.35	–	0.250	–
M	45° BSC		45° BSC	
N	2.54 BSC		0.100 BSC	
P	–	1.27	–	0.050
R	2.54	–	0.100	–
S	–	0.179	–	0.007

All JEDEC dimensions and notes apply.

CASE 31A-01

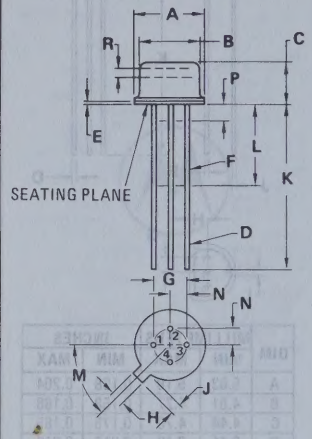


DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.51	9.40	0.335	0.370
B	7.75	8.51	0.305	0.335
C	3.81	4.57	0.150	0.180
D	0.41	0.48	0.016	0.019
G	5.08 BSC		0.200 BSC	
H	0.71	0.86	0.028	0.034
J	0.74	1.14	0.029	0.045
K	12.70	–	0.500	–
M	45° BSC		45° BSC	
N	2.54 BSC		0.100 BSC	

NOTE:
1. LEADS WITHIN 0.36 mm (0.014) DIA OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.

9

CASE 34A-01 TO-12

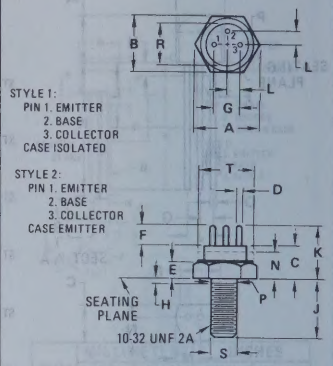


STYLE 1:
PIN 1. EMITTER 2
2. BASE 1
3. COLLECTOR 1
COLLECTOR 2
(CONNECTED TO CASE)
4. EMITTER 1, BASE 2

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.51	9.40	0.335	0.370
B	7.75	8.51	0.305	0.335
C	6.10	6.60	0.240	0.260
D	0.406	0.533	0.016	0.021
E	0.289	3.18	0.009	0.125
F	0.406	0.483	0.016	0.019
G	5.08 BSC		0.200 BSC	
H	0.711	0.864	0.028	0.034
J	0.737	1.14	0.029	0.045
K	12.70	–	0.500	–
L	6.35	–	0.250	–
M	45° BSC		45° BSC	
N	2.54 BSC		0.100 BSC	
P	–	1.27	–	0.050
R	2.54	–	0.100	–
S	–	0.178	–	0.007

All JEDEC dimensions and notes apply

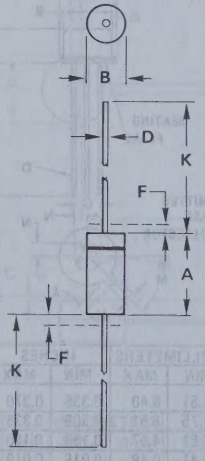
CASE 36-03 TO-60



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	12.57	13.08	0.495	0.515
B	10.77	11.10	0.424	0.437
C	5.46	8.13	0.215	0.320
D	0.762	1.17	0.030	0.046
E	2.29	3.43	0.090	0.135
G	4.70	5.46	0.185	0.215
H	–	1.98	–	0.078
J	9.53	11.56	0.375	0.455
K	9.02	12.19	0.355	0.480
L	2.29	2.79	0.090	0.110
N	–	4.19	–	0.165
P	4.14	4.80	0.163	0.189
R	8.13	9.14	0.320	0.360
T	9.14	11.10	0.360	0.437

All JEDEC dimensions and notes apply

CASE 41-06



NOTE:
1. LEAD FINISH & DIA UNCONTROLLED IN AREA "F".

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	25.40	–	1.000
B	–	12.70	–	0.500
D	0.76	0.86	0.030	0.034
F	–	1.27	–	0.050
K	31.75	–	1.250	–

-01

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	26.16	–	1.030
B	–	9.60	–	0.378
D	0.76	0.86	0.030	0.034
F	–	1.27	–	0.050
K	31.75	–	1.250	–

-03

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	30.99	–	1.220
B	–	16.28	–	0.641
D	0.76	0.86	0.030	0.034
F	–	1.27	–	0.050
K	44.45	–	1.750	–

-04

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	16.64	–	0.655
B	–	16.28	–	0.641
D	0.76	0.86	0.030	0.034
F	–	1.27	–	0.050
K	31.75	–	1.250	–

-05

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	13.21	–	0.520
B	–	6.98	–	0.275
D	0.46	0.56	0.018	0.022
F	–	1.27	–	0.050
K	31.75	–	1.250	–

-06

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	13.21	–	0.520
B	6.10	6.60	0.240	0.260
D	0.71	0.81	0.028	0.032
F	–	1.27	–	0.050
K	25.40	–	1.000	–

-08

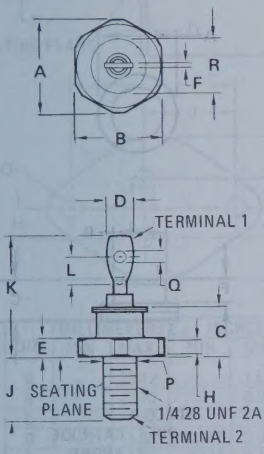
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	19.81	–	0.780
B	6.10	6.60	0.240	0.260
D	0.58	0.81	0.023	0.032
F	–	1.27	–	0.050
K	25.40	–	1.000	–

-09

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	29.34	–	1.155
B	7.70	8.20	0.303	0.323
D	0.71	0.81	0.028	0.032
F	–	1.27		0.050
K	25.40	–	1.000	–

-10

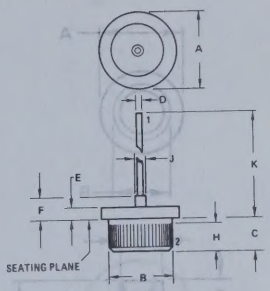
CASE 42A DO-5



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	20.04	20.29	0.789	0.799
B	16.94	17.45	0.667	0.687
C	–	11.43	–	0.450
D	–	9.53	–	0.375
E	2.92	5.08	0.115	0.200
F	–	2.03	–	0.080
H	1.52	–	0.060	–
J	10.72	11.51	0.422	0.453
K	–	25.40	–	1.000
L	3.96	–	0.156	–
P	5.59	6.32	0.220	0.249
Q	3.56	4.45	0.140	0.175
R	–	16.94	–	0.667

All JEDEC dimensions and notes apply

CASE 43-02 DO-21



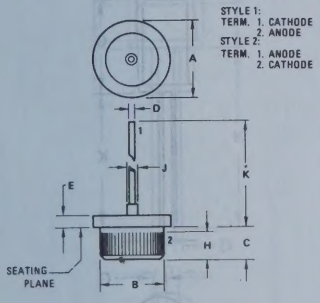
NOTES:
1. 50 TPI STRAIGHT KNURL.
2. POLARITY, INK MARKED ON PACKAGE

STYLE 1:
TERM. 1. CATHODE
2. ANODE

STYLE 2:
TERM. 1. ANODE
2. CATHODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	15.494	16.256	0.610	0.640
B	12.725	12.827	0.501	0.505
C	5.08	6.35	0.200	0.250
D	1.193	1.346	0.047	0.053
E	2.032	4.826	0.080	0.190
F	–	10.77	–	0.424
H	4.572	6.350	0.180	0.250
J	–	3.556	–	0.140
K	12.70	–	0.500	–

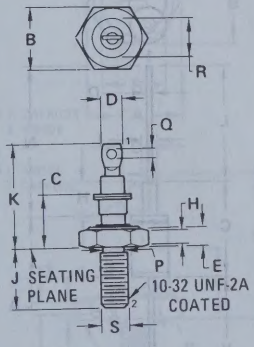
CASE 43-04



NOTES:
1. 50 TPI STRAIGHT KNURL.
2. POLARITY, INK MARKED ON PACKAGE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	15.49	16.26	0.610	0.640
B	12.73	12.83	0.501	0.505
C	5.08	6.35	0.200	0.250
D	2.46	2.62	0.097	0.103
E	2.03	4.83	0.080	0.190
H	5.08	6.35	0.200	0.250
J	–	3.56	–	0.140
K	–	15.24	–	0.600

CASE 44-02 DO-4

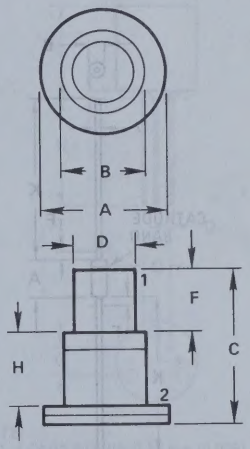


STYLE 1:
TERM. 1. ANODE
2. CATHODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
B	10.77	11.10	0.424	0.437
C	–	10.29	–	0.405
D	–	6.35	–	0.250
E	1.91	4.45	0.075	0.175
H	1.52	–	0.060	–
J	10.72	11.51	0.422	0.453
K	–	20.32	–	0.800
Q	1.52	–	0.060	–
R	–	10.77	–	0.424
P	4.14	4.80	0.163	0.189
S	4.31 REF		.1697 REF	

All JEDEC dimensions and notes apply.

CASE 45-01

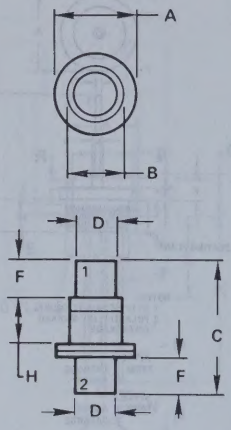


STYLE 1:
PIN 1. CATHODE
2. ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.97	3.30	0.117	0.130
B	1.96	2.21	0.077	0.087
C	3.78	4.09	0.149	0.161
D	1.52	1.68	0.060	0.066
F	1.50	1.65	0.059	0.065
H	1.78	1.93	0.070	0.076

9

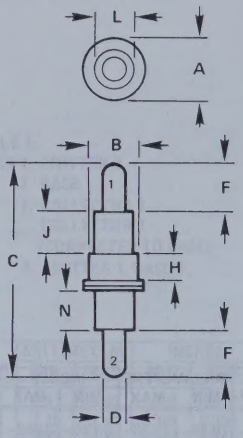
CASE 46-01



STYLE 1:
PIN 1. CATHODE
2. ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.97	3.30	0.117	0.130
B	1.96	2.21	0.077	0.087
C	5.21	5.72	0.205	0.225
D	1.52	1.68	0.060	0.066
F	1.50	1.65	0.059	0.065
H	1.78	1.93	0.070	0.076

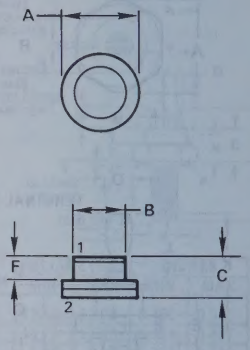
CASE 47-01



STYLE 1:
PIN 1. CATHODE
2. ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.72	6.22	0.225	0.245
B	4.70	4.95	0.185	0.195
C	19.18	20.19	0.755	0.795
D	2.24	2.49	0.088	0.098
F	4.57	4.83	0.180	0.190
H	2.29	2.54	0.090	0.100
J	3.68	4.06	0.145	0.160
L	3.94	4.19	0.155	0.165
N	3.18	3.43	0.125	0.135

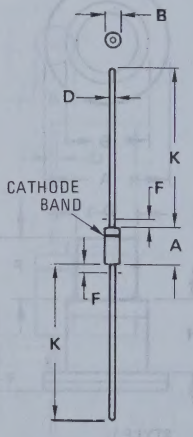
CASE 48-01



STYLE 1:
PIN 1. CATHODE
2. ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.97	3.30	0.117	0.130
B	1.96	2.11	0.077	0.083
C	1.27	1.78	0.050	0.070
F	0.33	0.69	0.013	0.027

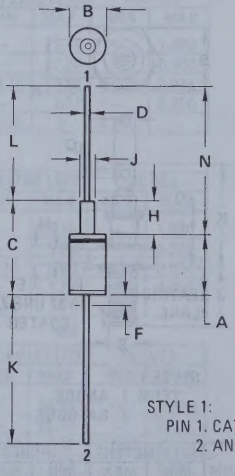
CASE 51-02 DO-7



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.84	7.62	0.230	0.300
B	2.16	2.72	0.085	0.107
D	0.46	0.56	0.018	0.022
F	–	1.27	–	0.050
K	25.40	–	1.000	–

All JEDEC dimensions and notes apply

CASE 52-03 DO-13

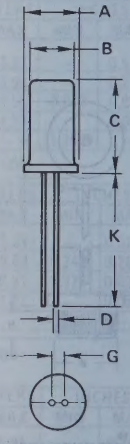


STYLE 1:
PIN 1. CATHODE
2. ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	7.44	9.07	0.293	0.357
B	5.46	5.97	0.215	0.235
C	–	14.48	–	0.570
D	0.64	0.89	0.025	0.035
F	–	4.78	–	0.188
J	1.14	2.54	0.045	0.100
K	25.40	41.28	1.000	1.625
L	25.40	41.28	1.009	1.625

All JEDEC dimensions and notes apply

CASE 53-01



NOTE:
1. POLARITY INDICATED BY CATHODE DOT ON BODY ADJACENT TO CATHODE LEAD.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.33	5.84	0.210	0.230
B	4.57	5.08	0.180	0.200
C	8.89	9.40	0.350	0.370
D	0.48	0.56	0.019	0.022
G	1.14	1.40	0.045	0.055
K	26.97	–	1.062	–

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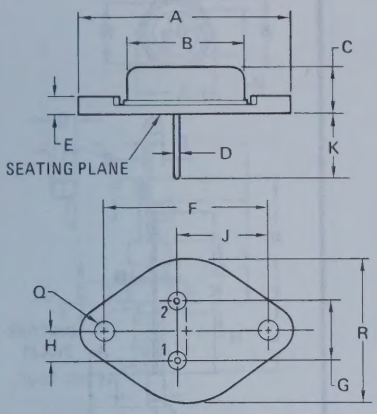
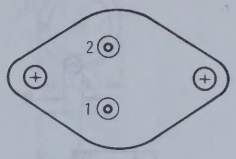
CASE 54-03



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	39.12	–	1.540
B	–	20.70	–	0.815
C	–	7.92	–	0.312
D	1.22	1.30	0.048	0.051
E	2.84	3.05	0.112	0.120
F	29.90	30.40	1.177	1.197
G	10.67	11.18	0.420	0.440
H	5.33	5.59	0.210	0.220
J	16.54	16.79	0.651	0.661
K	9.65	10.16	0.380	0.400
Q	3.84	4.09	0.151	0.161
R	–	26.16	–	1.030



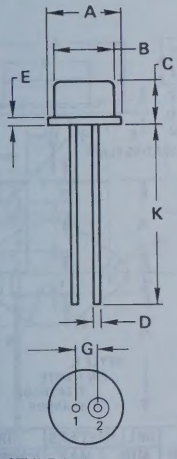
STYLE 1: (THY)
PIN 1. ANODE
2. GATE
CASE: CATHODE

STYLE 2: (THY)
PIN 1. GATE
2. CATHODE
CASE: ANODE

STYLE 3: (ZENER)
PIN 1. CATHODE
2. CATHODE
CASE: ANODE

STYLE 4: (ZENER)
PIN 1. ANODE
2. ANODE
CASE: CATHODE

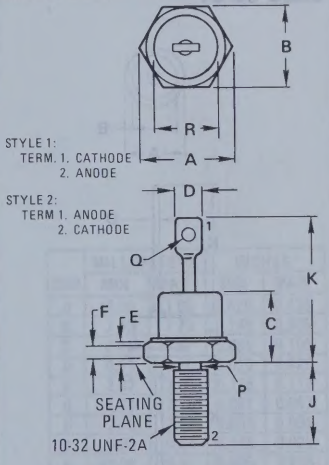
CASE 55-01



STYLE 1:
PIN 1. CATHODE
2. ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	10.59	–	0.417
B	–	8.59	–	0.338
C	–	6.50	–	0.256
D	0.99	1.09	0.039	0.043
E	–	1.19	–	0.047
G	2.92	3.43	0.115	0.135
K	22.35	25.40	0.880	1.000

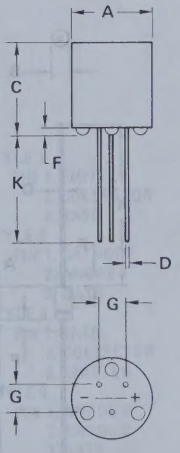
CASE 56-02 DO-4



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	11.94	12.83	0.470	0.505
B	10.77	11.10	0.424	0.437
C	–	10.29	–	0.405
D	–	6.35	–	0.250
E	1.91	4.45	0.075	0.175
F	1.52	–	0.060	–
J	10.72	11.51	0.422	0.453
K	–	20.32	–	0.800
P	4.14	4.80	0.163	0.189
Q	1.52	–	0.060	–
R	–	10.77	–	0.424

All JEDEC dimensions and notes apply

CASE 57-01

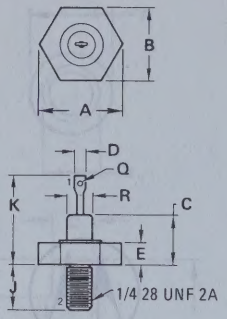


NOTE:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT MAXIMUM MATERIAL CONDITION, WITH RESPECT TO DIA "A".

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	14.22	–	0.560
C	–	16.26	–	0.640
D	0.74	0.89	0.029	0.035
F	–	1.02	–	0.040
G	5.08 BSC		0.200 BSC	
K	19.05	–	0.750	–

9

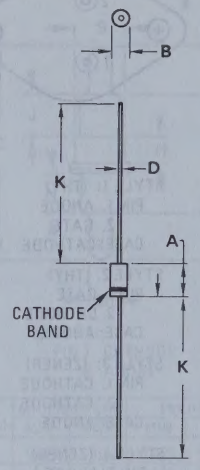
CASE 58-01



STYLE 1:
TERM. 1. CATHODE
2. ANODE
STYLE 2:
TERM. 1. ANODE
2. CATHODE

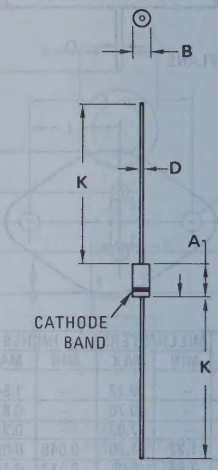
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	18.92	19.18	0.745	0.755
B	16.94	17.45	0.667	0.687
C	–	11.94	–	0.470
D	3.18	NOM	0.125	NOM
E	2.92	5.08	0.115	0.200
J	10.72	11.51	0.422	0.453
K	–	21.34	–	0.840
Q	1.78	NOM	0.070	NOM
R	–	7.11	–	0.280

CASE 59-01
CONFORMS TO DO-41



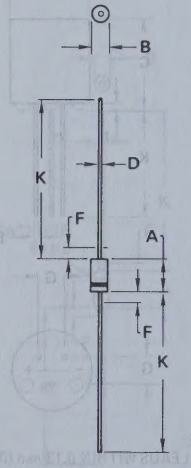
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.70	5.20	0.185	0.205
B	2.54	2.71	0.100	0.107
D	0.76	0.86	0.030	0.034
K	27.94	–	1.100	–

CASE 59-02



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.13	8.38	0.320	0.330
B	3.73	3.99	0.147	0.157
D	0.76	0.86	0.030	0.034
K	27.94	–	1.100	–

CASE 59-03 DO-41

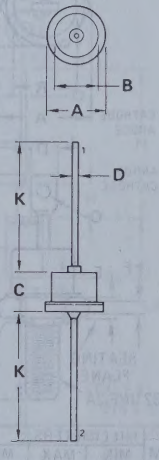


NOTE:
1. POLARITY DENOTED BY CATHODE BAND

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.07	5.20	0.160	0.205
B	2.04	2.71	0.080	0.107
D	0.71	0.86	0.028	0.034
F	–	1.27	–	0.050
K	27.94	–	1.100	–

All JEDEC dimensions and notes apply.

CASE 60-01

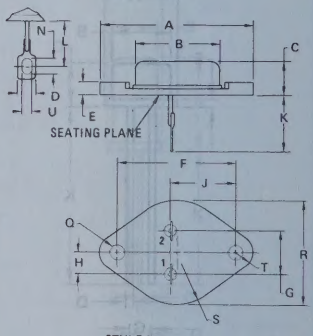


STYLE 1:
PIN 1. CATHODE
2. ANODE

STYLE 2:
PIN 1. ANODE
2. CATHODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	11.43	–	0.450
B	–	8.89	–	0.350
C	–	7.62	–	0.300
D	1.17	1.42	0.046	0.056
K	24.89	–	0.980	–

CASE 61-03

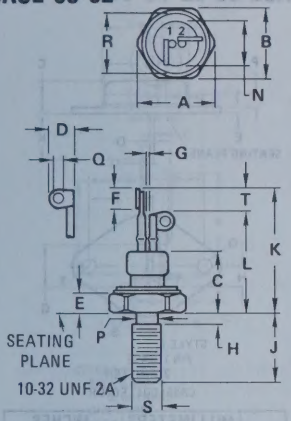


STYLE 1:
PIN 1. GATE
2. CATHODE
CASE: ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	38.23	39.12	1.505	1.540
B	20.32	20.70	0.800	0.815
C	6.99	7.92	0.275	0.312
D	4.83	5.33	0.190	0.210
E	2.84	3.05	0.112	0.120
F	29.90	30.40	1.177	1.197
G	10.67	11.18	0.420	0.440
H	5.33	5.59	0.210	0.220
J	16.54	16.79	0.651	0.661
K	16.51	17.27	0.650	0.680
N	3.30	4.32	0.130	0.170
Q	3.84	4.09	0.151	0.161
R	24.64	26.16	0.970	1.030
U	2.29	2.79	0.090	0.110

9

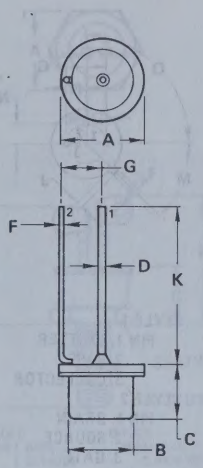
CASE 63-02



STYLE 1.
PIN 1. CATHODE
2. GATE
STUD – ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	12.57	12.83	0.495	0.505
B	10.77	11.10	0.424	0.437
C	–	10.80	–	0.425
D	3.94	4.70	0.155	0.185
E	–	3.56	–	0.140
J	10.16	11.51	0.400	0.453
K	–	21.72	–	0.855
L	–	17.78	–	0.700
N	–	7.11	–	0.280
Q	1.02	1.91	0.040	0.075

CASE 70-01

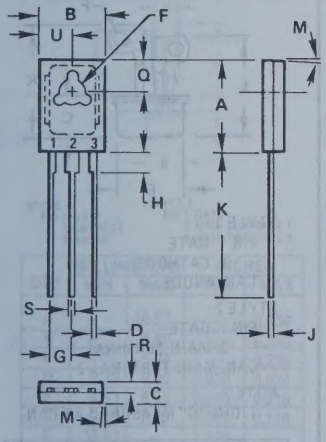


STYLE 2:
PIN 1. CATHODE
2. ANODE

STYLE 1:
PIN 1. ANODE
2. CATHODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	10.16	12.70	0.400	0.500
B	7.62	8.89	0.300	0.350
C	6.60	8.89	0.260	0.350
D	1.17	1.42	0.046	0.056
F	0.69	0.94	0.027	0.037
G	4.70	5.46	0.185	0.215
K	22.86	–	0.900	–

CASE 77-03

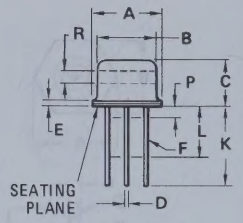


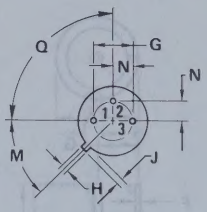
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	10.80	11.05	0.425	0.435
B	7.49	7.75	0.295	0.305
C	2.41	2.67	0.095	0.105
D	0.51	0.66	0.020	0.026
F	2.92	3.00	0.115	0.118
G	2.31	2.46	0.091	0.097
H	2.16	2.41	0.085	0.095
J	0.38	0.64	0.015	0.025
K	15.38	16.64	0.605	0.655
M	3° TYP		3° TYP	
Q	3.76	4.01	0.148	0.158
R	1.14	1.40	0.045	0.055
S	0.64	0.89	0.025	0.035
U	3.68	3.94	0.145	0.155

STYLE 1
PIN 1. EMITTER
2. COLLECTOR
3. BASE
STYLE 2
PIN 1. CATHODE
2. ANODE
3. GATE
STYLE 3
PIN 1. BASE
2. COLLECTOR
3. EMITTER
STYLE 4
PIN 1. ANODE 1
2. ANODE 2
3. GATE
STYLE 5
PIN 1. MT1
2. MT2
3. GATE

NOTE:
1. MT = MAIN TERMINAL

CASE 79-02 TO-39





DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.89	9.40	0.350	0.370
B	8.00	8.51	0.315	0.335
C	6.10	6.60	0.240	0.260
D	0.406	0.533	0.016	0.021
E	0.229	3.18	0.009	0.125
F	0.406	0.483	0.016	0.019
G	4.83	5.33	0.190	0.210
H	0.711	0.864	0.028	0.034
J	0.737	1.02	0.029	0.040
K	12.70	–	0.500	–
L	6.35	–	0.250	–
M	45° NOM		45° NOM	
P	–	1.27	–	0.050
Q	90° NOM		90° NOM	
R	2.54	–	0.100	–

All JEDEC dimensions and notes apply.

STYLE 1
PIN 1. EMITTER
2. BASE
3. COLLECTOR

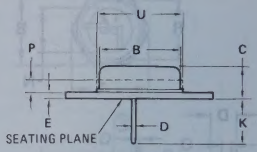
STYLE 2
PIN 1. DRAIN
2. SOURCE
3. GATE

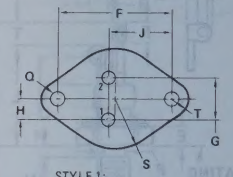
STYLE 3
PIN 1. CATHODE
2. GATE
3. ANODE

STYLE 4
PIN 1. MAIN TERM. 1
2. GATE
3. MAIN TERM. 2

STYLE 5
PIN 1. COLLECTOR
2. BASE
3. EMITTER

CASE 80-02 TO-66



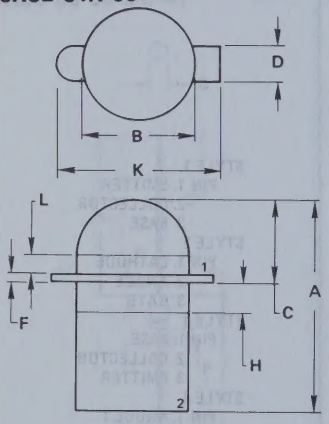


STYLE 1:
PIN 1. BASE
2. EMITTER
CASE: COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
B	11.94	12.70	0.470	0.500
C	6.35	8.64	0.250	0.340
D	0.71	0.86	0.028	0.034
E	1.27	1.91	0.050	0.075
F	24.33	24.43	0.958	0.962
G	4.83	5.33	0.190	0.210
H	2.41	2.67	0.095	0.105
J	14.48	14.99	0.570	0.590
K	9.14	–	0.360	–
P	–	1.27	–	0.050
Q	3.61	3.86	0.142	0.152
S	–	8.89	–	0.350
T	–	3.68	–	0.145
U	–	15.75	–	0.620

All JEDEC Dimensions and and Notes Apply.

CASE 81A-05

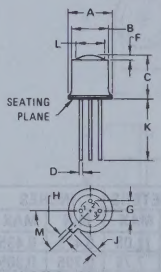


STYLE 1:
TERM 1. EMITTER
2. COLLECTOR

STYLE 2:
TERM 1. ANODE
2. CATHODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.79	3.30	0.100	0.130
B	1.47	1.57	0.058	0.062
C	0.71	1.02	0.028	0.040
D	0.41	0.61	0.016	0.024
F	0.13	0.25	0.005	0.010
H	0.48	0.53	0.019	0.021
K	2.11	2.36	0.083	0.093
L	0.20	0.30	0.008	0.012

CASE 82-01



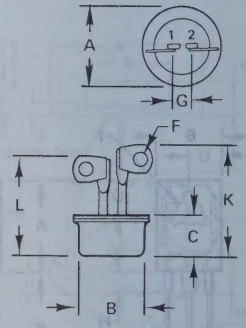
STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR

STYLE 2:
PIN 1. CATHODE
2. GATE
3. ANODE

NOTES:
1. LEADS WITHIN .13 mm (.005) RADIUS OF TRUE POSITION AT SEATING PLANE, AT MAXIMUM MATERIAL CONDITION.
2. PIN 3 INTERNALLY CONNECTED TO CASE.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.31	5.84	0.209	0.230
B	4.52	4.95	0.178	0.195
C	5.08	6.35	0.200	0.250
D	0.41	0.48	0.016	0.019
F	0.51	1.02	0.020	0.040
G	2.54 BSC		0.100 BSC	
H	0.99	1.17	0.039	0.046
J	0.84	1.22	0.033	0.048
K	12.70	–	0.500	–
L	3.35	4.01	0.132	0.158
M	45° BSC		45° BSC	

CASE 85-01



STYLE 1:
PIN 1. GATE
2. CATHODE
CAN. ANODE

STYLE 2:
PIN 1. GATE
2. MAIN TERMINAL 1
CAN. MAIN TERMINAL 2

NOTE:
1. DIM "G" MEASURED AT CAN.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	10.92	–	0.430
B	–	8.89	–	0.350
C	–	5.97	–	0.235
F	1.78 TYP		0.070 TYP	
G	2.29	2.79	0.090	0.110
K	–	14.73	–	0.580
L	–	13.46	–	0.530

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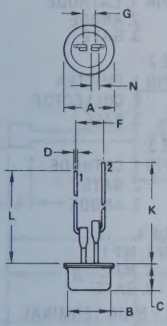
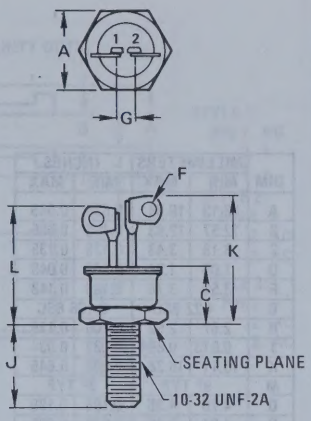
CASE 85L-02



STYLE 1:
PIN 1. GATE
2. CATHODE
CAN. ANODE
STYLE 2:
PIN 1. GATE
2. MAIN TERMINAL 1
CAN. MAIN TERMINAL 2
NOTES:
1. DIM "G" MEASURED AT CAN

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	10.92	–	0.430
B	–	8.89	–	0.350
C	–	5.97	–	0.235
D	0.76	0.86	0.030	0.034
F	4.83	5.33	0.190	0.210
G	2.29	2.79	0.090	0.110
K	33.53	–	1.320	–
L	31.50 TYP		1.240 TYP	
N	1.65	1.91	0.065	0.075

CASE 86-01



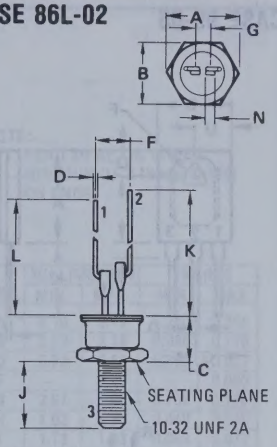
STYLE 1:
PIN 1. GATE
2. CATHODE
STUD: ANODE

STYLE 2:
PIN 1. GATE
2. MAIN TERMINAL 1
STUD: MAIN TERMINAL 2

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	11.10	–	0.437
C	–	7.87	–	0.310
F	1.78 TYP		0.070 TYP	
G	2.29	2.79	0.090	0.110
J	10.72	11.48	0.422	0.452
K	–	16.76	–	0.660
L	–	15.49	–	0.610

NOTE:
1. DIM "G" MEASURED AT CAN.

CASE 86L-02

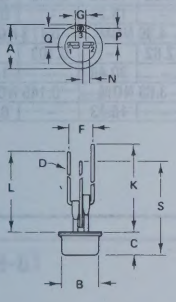


STYLE 1:
TERM. 1. GATE
2. CATHODE
3. ANODE

STYLE 2:
TERM. 1. GATE
2. CATHODE
3. ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	12.82	–	0.505
B	–	11.10	–	0.437
C	–	7.87	–	0.310
D	0.76	0.86	0.030	0.034
F	4.83	5.33	0.190	0.210
G	2.29	2.79	0.090	0.110
J	10.72	11.48	0.422	0.452
K	33.53	–	1.320	–
L	31.50 TYP		1.240 TYP	
N	1.65	1.91	0.065	0.075

CASE 87L-01



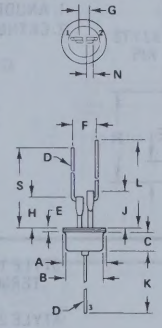
STYLE 1:
PIN 1. GATE
2. CATHODE
3. ANODE

STYLE 2:
PIN 1. GATE
2. MAIN TERMINAL 1
3. MAIN TERMINAL 2

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	10.92	–	0.430
B	–	8.89	–	0.350
C	–	5.97	–	0.235
D	0.76	0.86	0.030	0.034
F	4.83	5.33	0.190	0.210
G	2.29	2.79	0.090	0.110
K	33.53	–	1.320	–
L	31.50 TYP		1.240 TYP	
N	1.65	1.91	0.065	0.075
P	3.43	3.68	0.135	0.145
Q	4.57	5.08	0.180	0.200
S	30.48	–	1.20	–

NOTES:
1. DIM. "G" MEASURED AT CAN.
2. LEAD NO. 3 ±7.5° DISPLACEMENT.

CASE 88L-01



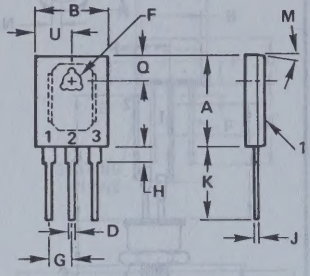
STYLE 1:
PIN 1. GATE
2. CATHODE
3. ANODE

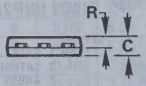
STYLE 2:
PIN 1. GATE
2. MAIN TERM. 1
3. MAIN TERM. 2

NOTE:
1. DIM "G" MEASURED AT CAN.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	10.92	–	0.430
B	–	8.89	–	0.350
C	–	4.70	–	0.185
D	0.76	0.86	0.030	0.034
E	0.76	1.27	0.030	0.050
F	4.83	5.33	0.190	0.210
G	2.29	2.79	0.090	0.110
H	–	6.86	–	0.270
J	–	8.13	–	0.320
K	22.86	–	0.900	–
L	33.53	–	1.320	–
N	1.65	1.91	0.065	0.075
S	31.50		1.240	

CASE 90-05





DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	16.13	16.38	0.635	0.645
B	12.57	12.83	0.495	0.505
C	3.18	3.43	0.125	0.135
D	1.09	1.24	0.043	0.049
F	3.51	3.76	0.138	0.148
G	4.22 BSC		0.166 BSC	
H	2.67	2.92	0.105	0.115
J	0.813	0.864	0.032	0.034
K	15.11	16.38	0.595	0.645
M	9° TYP		9° TYP	
Q	4.70	4.95	0.185	0.195
R	1.91	2.16	0.075	0.085
U	6.22	6.48	0.245	0.255

STYLE 1:
PIN 1. CATHODE
2. ANODE
3. GATE

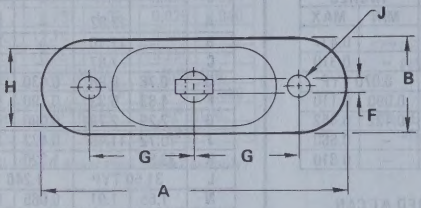
STYLE 2:
PIN 1. EMITTER
2. COLLECTOR
3. BASE

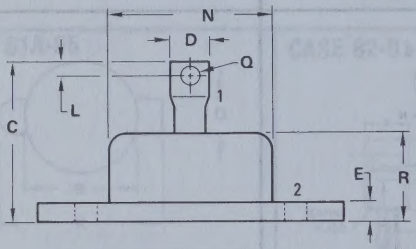
STYLE 3:
PIN 1. CATHODE
2. GATE
3. ANODE

STYLE 4:
PIN 1. MT 1
2. MT 2
3. GATE
MT = MAIN TERMINAL

NOTES:
1. DIM "D" UNCONTROLLED IN ZONE "H"
2. DIM "F" DIA THRU
3. HEAT SINK CONTACT AREA (BOTTOM)
4. LEADS WITHIN 0.005" RAD OF TRUE POSITION (TP) AT MAXIMUM MATERIAL CONDITION.

CASE 100-01

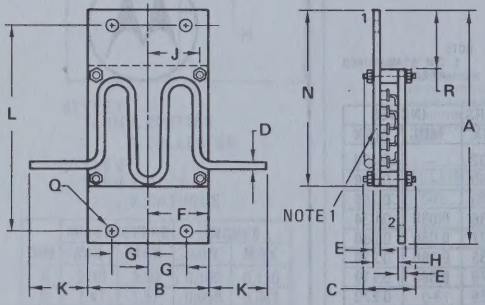




STYLE 1
1. CATHODE
2. ANODE
STYLE 2
1. ANODE
2. CATHODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	55.88	–	2.200
B	–	16.51	–	0.650
C	29.21 NOM		1.150 NOM	
D	6.60 NOM		0.260 NOM	
E	–	3.43	–	0.135
F	2.03 NOM		0.080 NOM	
G	18.80	19.30	0.740	0.760
H	–	15.24	–	0.600
J	4.39 NOM		0.173 NOM	
L	2.62	–	0.103	–
N	–	30.48	–	1.200
Q	3.68 NOM		0.145 NOM	
R	–	16.13	–	0.635

CASE 105-01



STYLE 1:
TERM 1. CATHODE
2. ANODE
STYLE 2:
TERM. 1. ANODE
2. CATHODE
NOTE:
1. CASE TEMPERATURE REFERENCE POINT
2. DIM "D" IS DIA OF COOLING TUBE.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	203.20	–	8.000
B	101.09	102.11	3.980	4.020
C	–	50.80	–	2.000
D	6.35 NOM		0.250 NOM	
E	6.35 TYP		0.250 TYP	
G	31.50	32.00	1.240	1.260
H	20.37	20.88	0.802	0.822
K	50.80 TYP		2.000 TYP	
L	176.53	179.07	6.950	7.050
N	152.40 TYP		6.000 TYP	
Q	10.31 NOM		0.406 NOM	
R	50.80 TYP		2.000 TYP	

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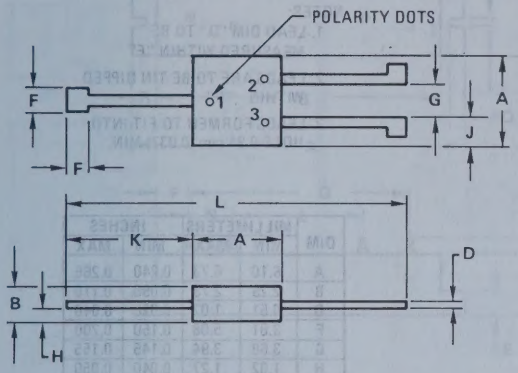
CASE 106-01



STYLE 1:
PIN 1. AC
2. +
3. -

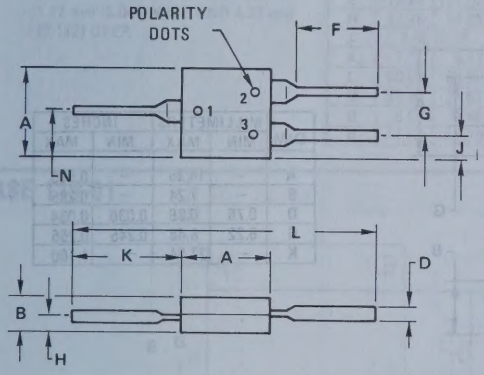
STYLE 2:
PIN 1. +
2. AC
3. AC

STYLE 3:
PIN 1. -
2. AC
3. AC

NOTE:
1. LEAD TO BE TIN DIPPED MINIMUM OF 3.18 mm (0.125) ON ENDS.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.10	6.73	0.240	0.265
B	2.29	2.79	0.090	0.110
D	0.23	0.53	0.009	0.021
F	–	2.29	–	0.090
G	2.67	3.05	0.105	0.120
H	1.02	1.14	0.040	0.045
J	1.73	1.83	0.068	0.072
K	8.89	10.16	0.350	0.400
L	23.88	27.05	0.940	1.065

CASE 107-01



STYLE 1:
PIN 1. AC
2. +
3. -

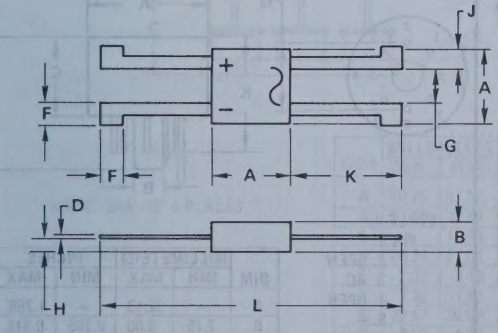
STYLE 2:
PIN 1. +
2. AC
3. AC

STYLE 3:
PIN 1. -
2. AC
3. AC

NOTES:
1. DIM "D" IS TO BE MEASURED IN THE PORTION OF THE LEAD DESIGNATED F.
2. LEADS ARE TO BE TIN DIPPED A MIN. OF 3.18 mm (0.125) ON ENDS.
3. LEADS FORMED TO FIT INTO A HOLE 1.02 mm (0.040) MIN.

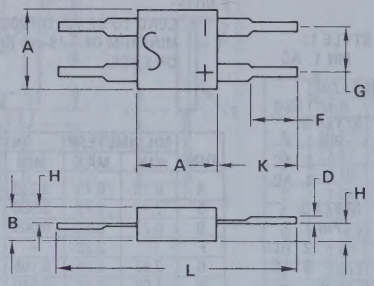
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.10	6.73	0.240	0.265
B	2.29	2.79	0.090	0.110
D	0.51	0.89	0.020	0.035
F	3.81	8.64	0.150	0.340
G	3.68	3.94	0.145	0.155
H	0.76	–	0.030	–
J	1.22	1.40	0.048	0.055
K	6.60	8.64	0.260	0.340
L	19.30	24.00	0.760	0.945
N	3.05	3.35	0.120	0.132

CASE 108-01



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.10	6.73	0.240	0.265
B	2.29	2.79	0.090	0.110
D	0.23	0.53	0.009	0.021
F	–	2.29	–	0.090
G	2.67	3.05	0.105	0.120
H	1.02	1.14	0.040	0.045
J	1.73	1.83	0.068	0.072
K	8.89	10.16	0.350	0.400
L	23.88	27.05	0.940	1.065

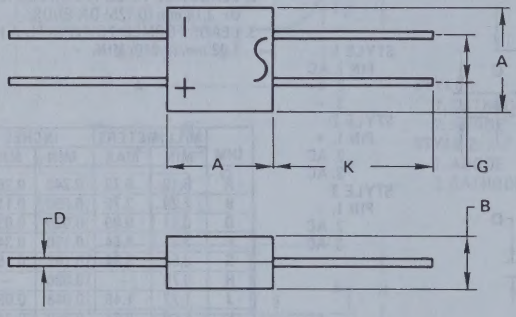
CASE 109-02



NOTES:
1. LEAD DIM "D" TO BE MEASURED WITHIN "F"
2. LEADS ARE TO BE TIN DIPPED WITHIN "F"
3. LEADS FORMED TO FIT INTO HOLE 0.94 mm (0.037) MIN.

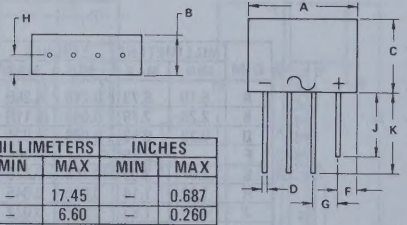
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.10	6.73	0.240	0.265
B	2.29	2.79	0.090	0.110
D	0.51	1.02	0.020	0.040
F	3.81	5.08	0.150	0.200
G	3.68	3.94	0.145	0.155
H	1.02	1.27	0.040	0.050
K	6.60	8.64	0.260	0.340
L	19.30	24.00	0.760	0.945

CASE 110-01



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	14.35	–	0.565
B	–	7.24	–	0.285
D	0.76	0.86	0.030	0.034
G	6.22	6.48	0.245	0.255
K	–	27.94	–	1.100

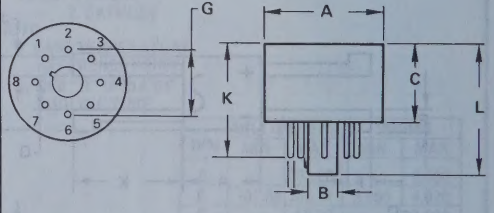
CASE 111-01



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	17.45	–	0.687
B	–	6.60	–	0.260
C	–	11.89	–	0.468
D	0.74	0.89	0.029	0.035
F	2.90 NOM		0.114 NOM	
G	3.73	3.89	0.147	0.153
H	3.18 NOM		0.125 NOM	
J	12.70	–	0.500	–
K	19.05	–	0.750	–

NOTE:
1. POLARITY INK MARKED ON CASE.

CASE 112-03



STYLE 1:
PIN 1. +
2. OPEN
3. AC
4. OPEN
5. –
6. OPEN
7. AC
8. OPEN
COLOR CODED

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	32.13	–	1.265
B	7.75	8.00	0.305	0.315
C	20.32	21.72	0.800	0.855
G	17.32	17.58	0.682	0.692
K	31.27	32.89	1.231	1.295
L	34.24	35.31	1.348	1.390

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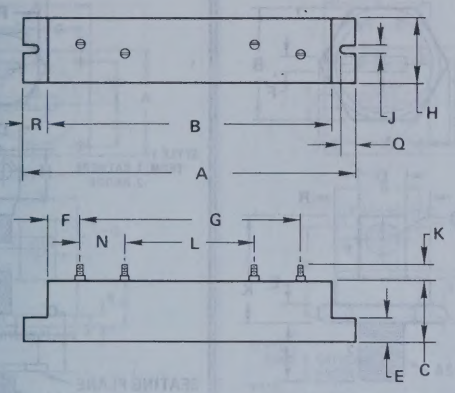
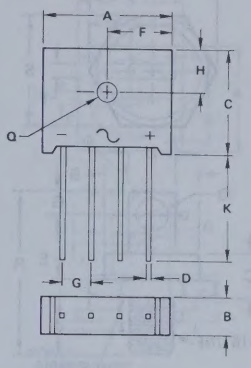
CASE 116-02



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	176.28	177.80	6.940	7.000
B	150.88	152.40	5.940	6.000
C	28.96	34.29	1.140	1.350
E	10.67	12.70	0.420	0.500
F	14.61	15.88	0.575	0.625
G	116.84	121.92	4.600	4.800
H	32.26	34.29	1.270	1.350
J	3.66 NOM		0.144 NOM	
K	7.11	8.13	0.280	0.320
L	66.04	68.58	2.600	2.700
N	25.40	26.67	1.000	1.050
Q	8.89	9.40	0.350	0.370
R	11.68	12.70	0.460	0.500

NOTES:
1. TERMINALS HAVE MILLED SLOTS 1.17 mm (0.046) WIDE AND 4.37 mm (0.172) DEEP.

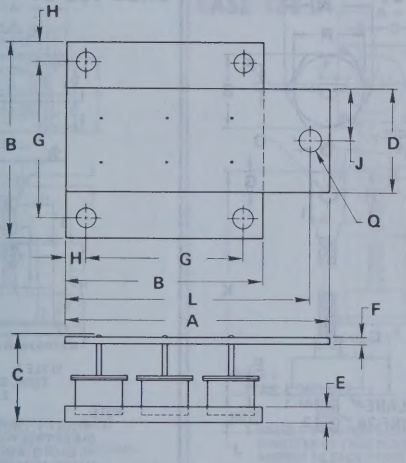
CASE 117-01



NOTE:
1. TERMINAL SYMBOLS MOLDED INTO CASE.
2. LEADS ARE SQUARE & CENTERED ON PACKAGE.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	22.35	23.37	0.880	0.920
B	6.10	7.11	0.240	0.280
C	18.16	19.18	0.715	0.755
D	0.89	1.14	0.035	0.045
F	11.18	11.68	0.440	0.460
G	4.57	5.59	0.180	0.220
H	7.24	7.75	0.285	0.305
K	19.05	–	0.750	–
Q	3.43	3.94	0.135	0.155

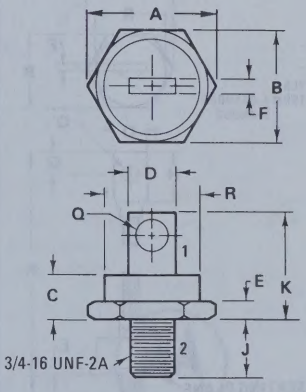
CASE 119-01



NOTE: DIA "Q" 5 PLACES

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	50.29	51.31	1.980	2.020
B	37.59	38.61	1.480	1.520
C	–	16.51	–	0.650
D	20.24	21.01	0.797	0.827
E	2.92	3.43	0.115	0.135
F	1.32	1.83	0.052	0.072
G	29.97	30.99	1.180	1.220
H	3.56	4.06	0.140	0.160
J	10.06	10.57	0.396	0.416
L	46.74	47.74	1.840	1.860
Q	3.30	3.81	0.130	0.150

CASE 126-01



STYLE 1:
TERM. 1. CATHODE
2. ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	51.08	51.59	2.011	2.031
B	44.32	44.58	1.745	1.755
C	–	27.94	–	1.100
D	18.80	19.30	0.740	0.760
E	9.40	9.91	0.370	0.390
F	6.10	6.60	0.240	0.260
J	20.32	25.65	0.800	1.010
K	–	50.55	–	1.990
Q	9.27	9.78	0.365	0.385
R	–	43.69	–	1.720

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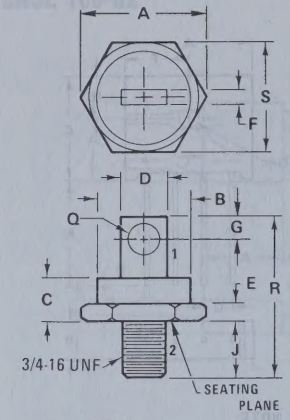
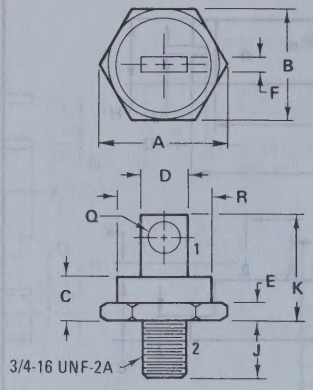
CASE 127-01



STYLE 1:
TERM. 1. ANODE
2. CATHODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	58.27	59.05	2.294	2.325
B	–	49.28	–	1.946
C	–	27.94	–	1.100
D	25.15	27.94	0.990	1.100
E	9.14	9.91	0.360	0.390
F	5.84	6.86	0.230	0.270
G	10.67	11.68	0.420	0.460
J	25.02	25.78	0.985	1.015
Q	14.02	14.53	0.552	0.572
R	–	88.90	–	3.500
S	50.42	51.18	1.985	2.015

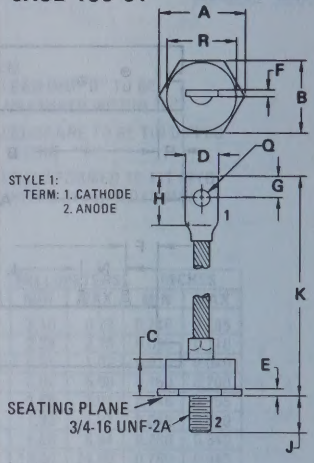
CASE 128-01



STYLE 1:
TERM. 1. CATHODE
2. ANODE

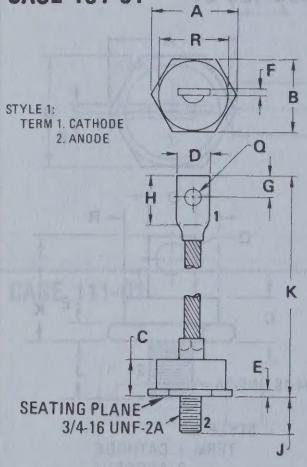
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	65.79	66.29	2.590	2.610
B	57.02	57.28	2.245	2.255
C	–	27.94	–	1.100
D	25.15	27.94	0.990	1.100
E	9.40	9.65	0.370	0.380
F	7.67	8.18	0.302	0.322
J	25.15	25.65	0.990	1.010
K	–	68.83	–	2.710
Q	14.02	14.53	0.552	0.572
R	–	55.88	–	2.200

CASE 130-01



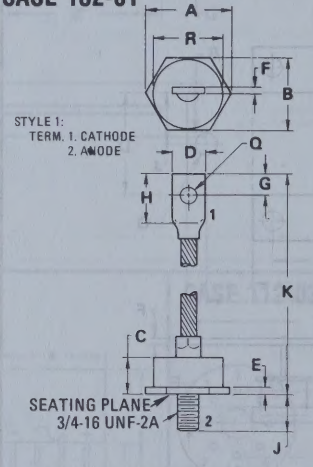
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	56.90	57.40	2.240	2.260
B	44.20	44.70	1.740	1.760
C	–	27.94	–	1.100
D	15.49	16.26	0.610	0.640
E	9.40	9.91	0.370	0.390
F	3.17	3.94	0.125	0.155
G	7.01	7.26	0.276	0.286
H	15.87	–	0.625	–
J	20.32	25.65	0.800	1.010
K	173.99	180.34	6.850	7.100
Q	8.59	8.84	0.338	0.348
R	–	43.69	–	1.720

CASE 131-01



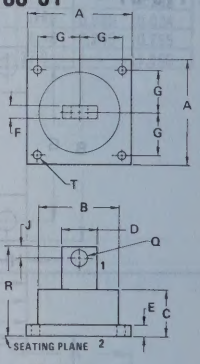
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	57.84	58.34	2.277	2.297
B	50.67	50.93	1.995	2.005
C	–	27.94	–	1.100
D	23.88	25.40	0.940	1.000
E	9.40	9.65	0.370	0.380
F	4.57	5.08	0.180	0.200
G	10.92	11.43	0.430	0.450
H	22.25	23.77	0.876	0.936
J	25.27	25.53	0.995	1.005
K	173.99	180.34	6.850	7.100
Q	13.36	13.61	0.526	0.536
R	–	49.28	–	1.940

CASE 132-01



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	65.46	65.96	2.577	2.597
B	57.02	57.28	2.245	2.255
C	–	27.94	–	1.100
D	28.45	29.46	1.120	1.160
E	9.40	9.65	0.370	0.380
F	5.71	6.98	0.225	0.275
G	13.51	15.04	0.532	0.592
H	30.99	32.51	1.220	1.280
J	25.15	25.65	0.990	1.010
K	177.80	185.42	7.000	7.300
Q	13.51	15.04	0.532	0.592
R	–	55.88	–	2.200

CASE 133-01



STYLE 1:
TERM. 1. ANODE
2. CATHODE

NOTE:
1. HOLES ("T") WITHIN .25 mm (0.010) DIA OF TRUE POSITION WITH RESPECT TO EACH OTHER AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	57.02	57.28	2.245	2.255
B	–	43.69	–	1.720
C	–	25.40	–	1.000
D	18.80	19.30	0.740	0.760
E	6.10	6.60	0.240	0.260
F	6.10	6.60	0.240	0.260
G	22.23 BSC		0.875 BSC	
J	5.08	7.62	0.200	0.300
Q	9.40	9.65	0.370	0.380
R	–	48.26	–	1.900
T	5.03	5.28	0.198	0.208

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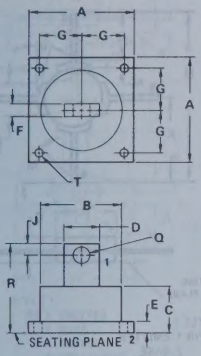
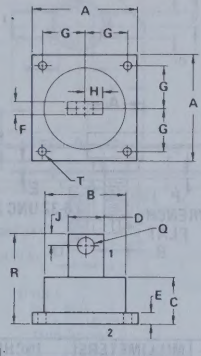
CASE 134-01



STYLE 1:
TERM. 1. ANODE
2. CATHODE
NOTE:
1. HOLES ("T") WITHIN 0.25 mm (0.010) DIA. OF TRUE POSITION WITH RESPECT TO EACH OTHER AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	76.07	76.33	2.995	3.005
B	–	53.34	–	2.100
C	–	25.40	–	1.000
D	25.15	27.94	0.990	1.100
E	6.10	6.60	0.240	0.260
F	6.10	6.60	0.240	0.260
G	31.75 BSC		1.250 BSC	
J	10.67	11.68	0.420	0.460
Q	14.15	14.40	0.557	0.567
R	–	63.50	–	2.500
T	7.01	7.26	0.276	0.286

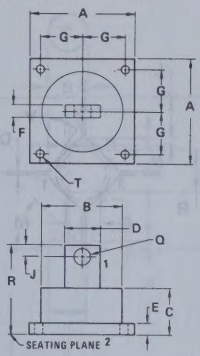
CASE 135-01



STYLE 1:
TERM. 1. CATHODE
2. ANODE
NOTE:
1. HOLES ("T") WITHIN 0.25 mm (0.010) DIA. OF TRUE POSITION WITH RESPECT TO EACH OTHER AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	75.95	76.45	2.990	3.010
B	–	55.88	–	2.200
C	–	25.40	–	1.000
D	25.15	27.94	0.990	1.100
E	6.10	6.60	0.240	0.260
F	7.80	8.05	0.307	0.317
G	31.75 BSC		1.250 BSC	
H	11.30	13.97	0.445	0.550
J	10.67	11.68	0.420	0.460
Q	14.15	14.40	0.557	0.567
R	50.80	60.33	2.000	2.375
T	7.01	7.26	0.276	0.286

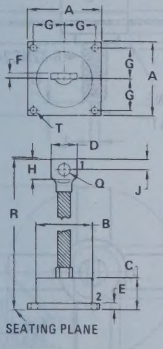
CASE 136-01



STYLE 1:
TERM 1. ANODE
2. CATHODE
NOTE:
1. HOLES ("T") WITHIN 0.25 mm (0.010) DIAMETER OF TRUE POSITION WITH RESPECT TO EACH OTHER AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	81.28	83.82	3.200	3.300
B	–	73.28	–	2.885
C	–	25.40	–	1.000
D	51.50	32.00	1.240	1.260
E	6.10	6.60	0.240	0.260
F	12.57	12.83	0.495	0.505
G	34.93 BSC		1.365 BSC	
J	9.52	11.94	0.375	0.470
Q	14.15	14.40	0.557	0.567
R	–	63.50	–	2.500
T	7.01	7.26	0.276	0.286

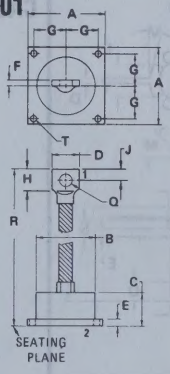
CASE 137-01



STYLE 1:
TERM. 1. CATHODE
2. ANODE
NOTE:
1. HOLES ("T") WITHIN 0.25 mm (0.010) DIA. OF TRUE POSITION WITH RESPECT TO EACH OTHER AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	56.90	57.40	2.240	2.260
B	–	43.69	–	1.720
C	–	25.40	–	1.000
D	15.49	16.26	0.610	0.640
E	6.10	6.60	0.240	0.260
F	3.18	3.94	0.125	0.155
G	22.23 BSC		0.875 BSC	
H	15.87	–	0.625	–
J	6.88	7.39	0.271	0.291
Q	8.58	8.84	0.338	0.348
R	–	180.34	–	7.100
T	5.03	5.28	0.198	0.208

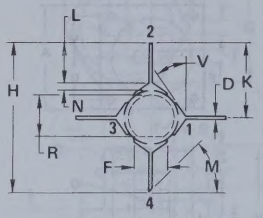
CASE 138-01

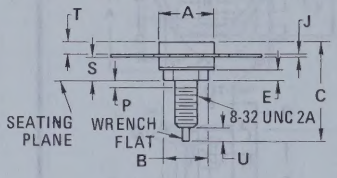


STYLE 1:
TERM. 1. CATHODE
2. ANODE
NOTE:
1. HOLES ("T") WITHIN 0.25 mm (0.010) DIAMETER OF TRUE POSITION WITH RESPECT TO EACH OTHER AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	75.95	76.45	2.990	3.010
B	–	53.34	–	2.100
C	–	25.40	–	1.000
D	23.88	25.40	0.940	1.000
E	6.10	6.60	0.240	0.260
F	4.57	5.08	0.180	0.200
G	31.75 BSC		1.250 BSC	
H	22.22	–	0.875	–
J	9.83	12.37	0.387	0.487
Q	13.36	13.61	0.526	0.536
R	–	175.26	–	6.900
T	7.01	7.26	0.276	0.286

CASE 144B-03



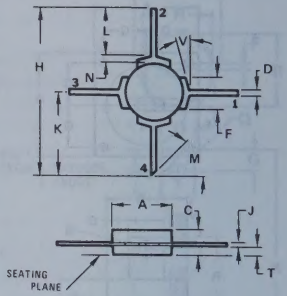


STYLE 1:
PIN 1. EMITTER
2. BASE
3. EMITTER
4. COLLECTOR

NOTE:
1. DIM "N" IS FROM DIA "A" TO ANGLE "V"

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.40	9.78	0.370	0.385
B	8.13	8.38	0.320	0.330
C	17.63	19.46	0.694	0.766
D	0.64	0.89	0.025	0.035
E	1.78	2.03	0.070	0.080
F	5.59	5.84	0.220	0.230
H	26.16	27.69	1.030	1.090
J	0.10	0.15	0.004	0.006
K	13.08	13.84	0.515	0.545
L	7.11	7.37	0.280	0.290
M	40°	50°	40°	50°
N	1.27	1.52	0.050	0.060
P		1.27		0.050
R	7.59	7.80	0.299	0.307
S	4.01	4.52	0.158	0.178
T	2.16	2.41	0.085	0.095
U	2.54	3.30	0.100	0.130
V	10°	20°	10°	20°

CASE 144C-02



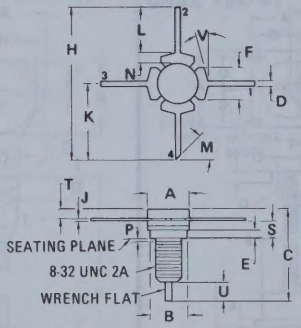
STYLE 1:
PIN 1. EMITTER
2. BASE
3. EMITTER
4. COLLECTOR

NOTE:
1. DIM "N" IS FROM DIA "A" TO ANGLE "V".

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.40	9.78	0.370	0.385
C	4.06	4.32	0.160	0.170
D	0.64	0.89	0.025	0.035
F	5.59	5.84	0.220	0.230
H	26.67	27.18	1.050	1.070
J	0.10	0.15	0.004	0.006
K	13.34	13.59	0.525	0.535
L	7.11	7.37	0.280	0.290
M	40°	50°	40°	50°
N	1.27	1.52	0.050	0.060
T	1.65	1.91	0.065	0.075
V	10°	20°	10°	20°

CASE 144D-04

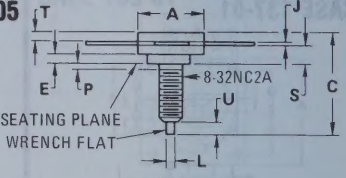
STYLE 1:
PIN 1. EMITTER
2. BASE
3. EMITTER
4. COLLECTOR
STYLE 2:
PIN 1. BASE
2. EMITTER
3. BASE
4. COLLECTOR

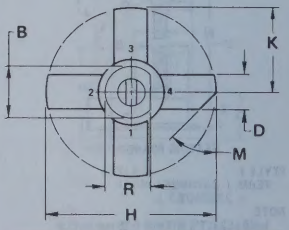


NOTES:
1. DIM "N" IS FROM DIA "A" TO ANGLE "V".
2. DIM "P" IS THREAD RELIEF.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	7.06	7.26	0.278	0.286
B	6.25	6.45	0.246	0.254
C	15.49	16.51	0.610	0.650
D	0.64	0.89	0.025	0.035
E	1.40	1.65	0.055	0.065
F	5.59	5.84	0.220	0.230
H	26.67	27.18	1.050	1.070
J	0.10	0.15	0.004	0.006
K	13.34	13.59	0.525	0.535
L	8.26	8.51	0.325	0.335
M	40°	50°	40°	50°
N	1.40	1.65	0.055	0.065
P	–	1.27	–	0.050
S	3.00	3.25	0.118	0.128
T	1.40	1.65	0.055	0.065
U	2.92	3.68	0.115	0.145
V	10°	20°	10°	20°

CASE 145A-05

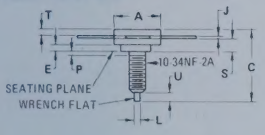


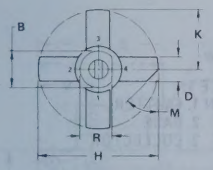


STYLE 1:
PIN 1. EMITTER
2. BASE
3. EMITTER
4. COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.40	9.78	0.370	0.385
B	8.13	8.38	0.320	0.330
C	17.02	20.07	0.670	0.790
D	5.46	5.97	0.215	0.235
E	1.78	2.03	0.070	0.080
H	22.10	23.62	0.870	0.930
J	0.10	0.15	0.004	0.006
K	11.05	11.81	0.435	0.465
L	1.40	1.65	0.055	0.065
M	45° NOM		45° NOM	
P	–	1.27	–	0.050
R	7.59	7.80	0.299	0.307
S	4.01	4.52	0.158	0.178
T	2.11	2.46	0.083	0.097
U	2.49	3.35	0.098	0.132

CASE 145A-06

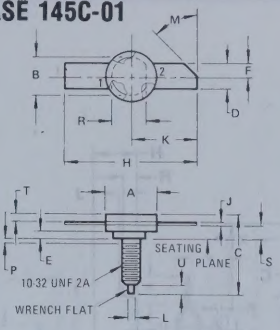




STYLE 1:
PIN 1. EMITTER
2. BASE
3. EMITTER
4. COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	12.45	12.95	0.490	0.510
B	10.54	10.80	0.415	0.425
C	19.68	22.73	0.775	0.895
D	5.46	5.97	0.215	0.235
E	1.83	1.98	0.072	0.078
H	22.10	23.62	0.870	0.930
J	0.10	0.15	0.004	0.006
K	11.05	11.81	0.435	0.465
L	1.65	1.90	0.065	0.075
M	45° NOM		45° NOM	
P	–	1.27	–	0.050
R	9.73	10.06	0.383	0.396
S	3.84	4.50	0.151	0.177
T	2.11	2.46	0.083	0.097
U	2.49	3.35	0.098	0.132

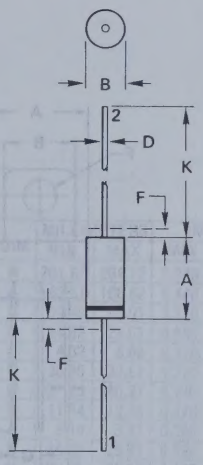
CASE 145C-01



STYLE 1:
PIN 1. BASE
2. COLLECTOR
STUD-EMITTER

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	12.45	12.95	0.490	0.510
B	10.41	10.92	0.410	0.430
C	21.21	21.46	0.835	0.845
D	8.51	8.76	0.335	0.345
E	1.78	2.03	0.070	0.080
F	4.19	4.45	0.165	0.175
H	22.86	23.62	0.900	0.930
J	0.10	0.15	0.004	0.006
K	11.43	11.81	0.450	0.465
L	1.65	1.91	0.065	0.075
M	40°	50°	40°	50°
P	–	1.27	–	0.050
R	9.78	10.03	0.385	0.395
S	4.11	4.42	0.162	0.174
T	2.16	2.41	0.085	0.095
U	2.54	3.30	0.100	0.130

CASE 146-01 DO-14

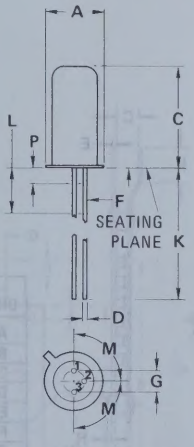


STYLE 1:
PIN 1. CATHODE
2. ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.84	7.62	0.230	0.300
B	2.74	3.56	0.108	0.140
D	0.46	0.56	0.018	0.022
F	–	1.27	–	0.050
K	25.40	–	1.000	–

All JEDEC dimensions and notes apply.

CASE 149-02 TO-1

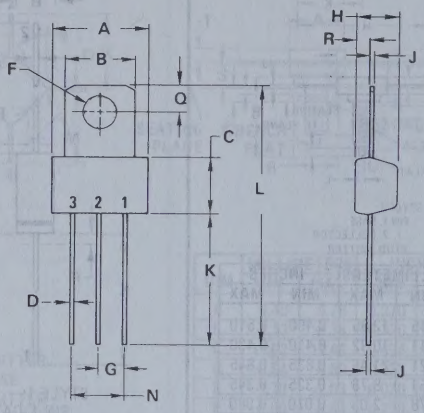


STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	6.10	–	0.240
C	–	10.41	–	0.410
D	–	0.53	–	0.021
F	0.406	0.483	0.016	0.019
G	1.55	2.06	0.061	0.081
K	38.10	–	1.500	–
L	6.35	–	0.250	–
M	90° NOM		90° NOM	
P	–	1.27	–	0.050

All JEDEC notes and dimensions apply.

CASE 152-02

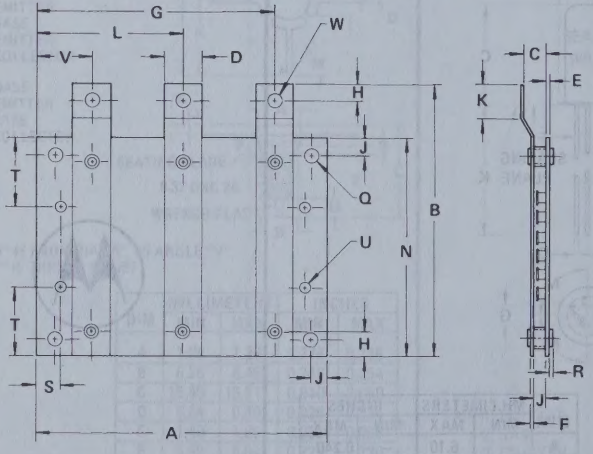


STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.14	9.53	0.360	0.375
B	6.60	7.24	0.260	0.285
C	5.41	5.66	0.213	0.223
D	0.38	0.53	0.015	0.021
F	3.18	3.33	0.125	0.131
G	2.54 BSC		0.100 BSC	
H	3.94	4.19	0.155	0.165
J	0.36	0.41	0.014	0.016
K	12.07	12.70	0.475	0.500
L	25.02	25.53	0.985	1.005
N	5.08 BSC		0.200 BSC	
Q	2.39	2.69	0.094	0.106
R	1.14	1.40	0.045	0.055

NOTE:
1. LEADS WITHIN 0.15 mm (0.006) TOTAL OF TRUE POSITION AT CASE, AT MAXIMUM MATERIAL CONDITION.

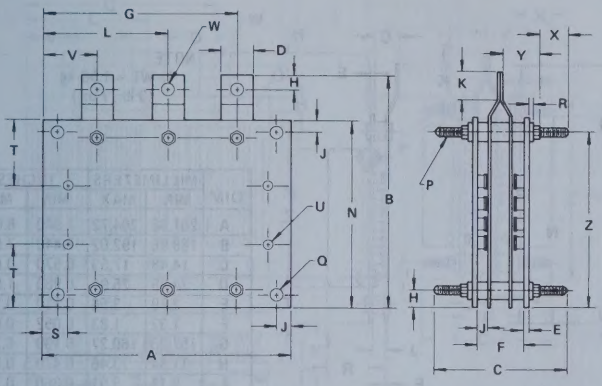
CASE 154-01



NOTE:
1. WT ≈ 454 GR. (16 oz.)

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	210.68	204.72	7.940	8.060
B	163.58	166.62	6.440	6.560
C	14.48	17.53	0.570	0.690
D	24.89	25.91	0.980	1.020
E	4.32	5.08	0.170	0.200
F	1.32	1.83	0.052	0.072
G	157.23	160.27	6.190	6.310
H	11.94	13.46	0.470	0.530
J	9.14	9.91	0.360	0.390
K	24.89	25.91	0.980	1.020
L	100.08	103.12	3.940	4.060
N	125.48	128.52	4.940	5.060
P	6.35	6.86	0.250	0.270
Q	8.33	9.09	0.328	0.358
R	2.92	3.68	0.115	0.145
S	14.22	15.75	0.560	0.620
T	42.93	44.45	1.690	1.750
U	5.18	5.94	0.204	0.234
V	42.93	45.97	1.690	1.810
W	9.93	10.69	0.391	0.421

CASE 155-01

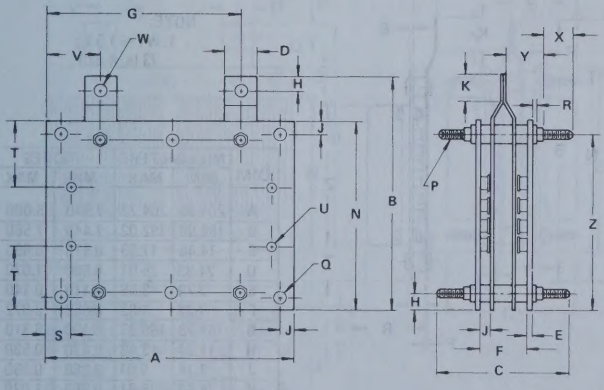


NOTE:
1. WT ≈ 1.02 kg (2 lb.,4 oz.)

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	201.67	204.72	7.940	8.060
B	163.57	166.62	6.440	6.560
C	94.49	96.01	3.720	3.780
D	24.89	25.91	0.980	1.020
E	4.32	5.08	0.170	0.200
F	30.99	32.51	1.220	1.280
G	157.23	160.27	6.190	6.310
H	11.94	13.46	0.470	0.530
J	9.14	9.91	0.360	0.390
K	24.89	25.91	0.980	1.020
L	100.08	103.12	3.940	4.060
N	126.24	127.76	4.970	5.030
P	1/4-2 UNC-2A			
Q	8.33	9.09	0.328	0.358
R	2.92	3.68	0.115	0.145
S	14.22	17.02	0.560	0.670
T	42.93	44.45	1.690	1.750
U	5.18	5.94	0.204	0.234
V	42.93	45.97	1.690	1.810
W	9.93	10.70	0.391	0.421
X	15.24	16.76	0.600	0.660
Y	30.99	32.51	1.220	1.280
Z	113.54	115.06	4.470	4.530

CASE 155A-01

NOTE:
1. WT ≈ 0.87 kg (1 lb, 15 oz.)



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	201.67	204.72	7.940	8.060
B	163.57	166.62	6.440	6.560
C	94.49	96.01	3.720	3.780
D	24.89	25.91	0.980	1.020
E	4.32	5.08	0.170	0.200
F	30.99	32.51	1.220	1.280
G	157.23	160.27	6.190	6.310
H	11.94	13.46	0.470	0.530
J	9.14	9.91	0.360	0.390
K	24.89	25.91	0.980	1.020
N	126.24	127.76	4.970	5.030
P	1/4-20 UNC-2A			
Q	8.33	9.09	0.328	0.358
R	2.92	3.68	0.115	0.145
S	14.22	17.02	0.560	0.670
T	42.93	44.45	1.690	1.750
U	5.18	5.94	0.204	0.234
V	42.93	45.97	1.690	1.810
W	9.93	10.69	0.391	0.421
X	15.24	16.76	0.600	0.660
Y	30.99	32.51	1.220	1.280
Z	113.54	115.06	4.470	4.530

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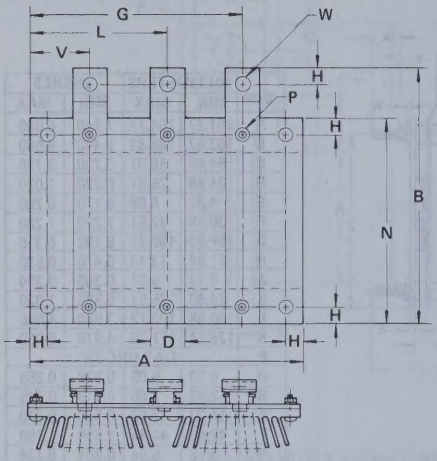
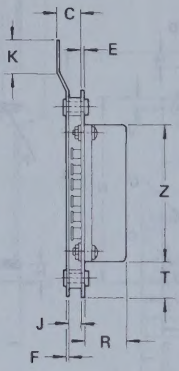
CASE 156-01

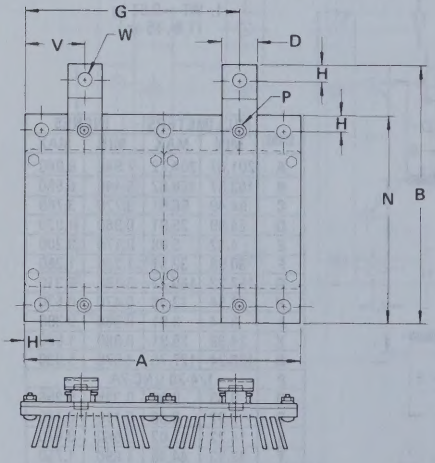


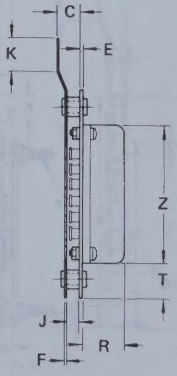


NOTE:
1. WT ≈ 1.56 kg
(3 lb., 7 oz.)

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	201.68	204.72	7.940	8.060
B	188.98	192.02	7.440	7.560
C	14.48	17.53	0.570	0.690
D	24.89	25.91	0.980	1.020
E	2.79	3.56	0.110	0.140
F	1.32	1.83	0.052	0.072
G	157.23	160.27	6.190	6.310
H	11.94	13.46	0.470	0.530
J	9.14	9.91	0.360	0.390
K	24.89	25.91	0.980	1.020
L	100.08	103.12	3.940	4.060
N	150.88	153.92	5.940	6.060
P	6.35	6.86	0.250	0.270
R	29.39	30.96	1.157	1.219
T	24.89	25.91	0.980	1.020
Y	42.93	45.97	1.690	1.810
W	10.06	10.57	0.396	0.416
Z	100.08	103.12	3.940	4.060

CASE 156A-01

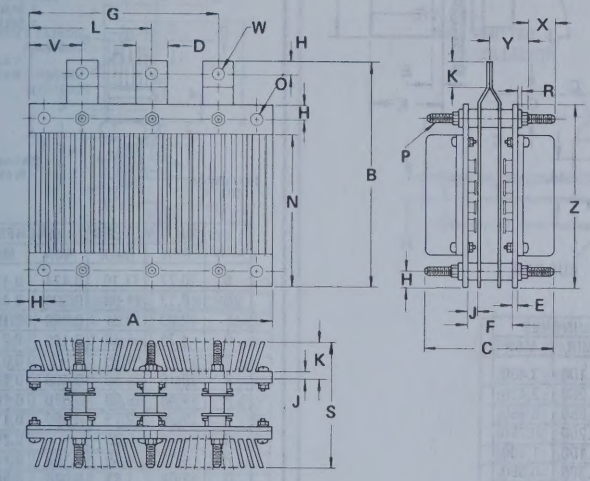




NOTE:
1. WT ≈ 1.5 kg
(3 lb. 4 oz.)

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	201.68	204.72	7.940	8.060
B	188.98	192.02	7.440	7.560
C	14.48	17.53	0.570	0.690
D	24.89	25.91	0.980	1.020
E	2.79	3.56	0.110	0.140
F	1.32	1.83	0.052	0.072
G	157.23	160.27	6.190	6.310
H	11.94	13.46	0.470	0.530
J	9.14	9.91	0.360	0.390
K	24.89	25.91	0.980	1.020
N	150.88	153.92	5.940	6.060
P	6.35	6.86	0.250	0.220
R	29.39	30.96	1.157	1.219
T	24.89	25.91	0.980	1.020
V	42.93	45.97	1.690	1.810
W	10.06	10.57	0.396	0.416
Z	100.08	103.12	3.940	4.060

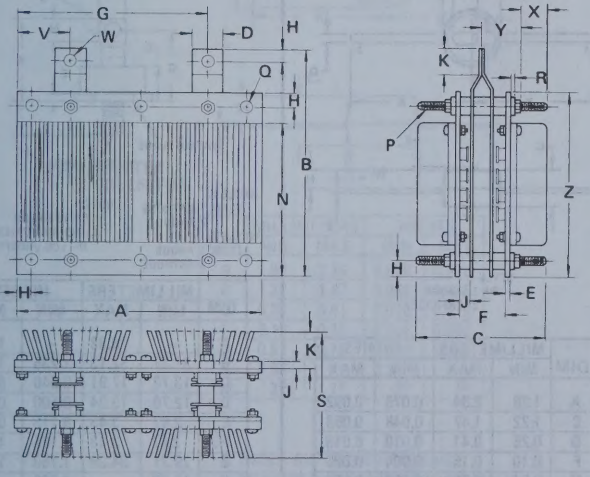
CASE 157-01



NOTE:
1. WT ≈ 2.8 kg (6 lb, 1 oz.)

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	201.68	204.72	7.940	8.060
B	188.98	192.02	7.440	7.560
C	93.73	96.77	3.690	3.810
D	24.89	25.91	0.980	1.020
E	2.79	3.56	0.110	0.140
F	30.23	33.27	1.190	1.310
G	157.23	160.27	6.190	6.310
H	11.94	13.46	0.470	0.530
J	9.14	9.91	0.360	0.390
K	24.89	25.91	0.980	1.020
L	100.08	103.12	3.940	4.060
N	125.48	128.52	4.940	5.060
P	1/4-20 UNC-2A			
Q	9.93	10.69	0.391	0.421
R	4.45	5.21	0.175	0.205
S	97.03	100.08	3.820	3.940
V	42.93	45.97	1.690	1.810
W	9.93	10.69	0.391	0.421
X	16.76	18.29	0.660	0.720
Y	29.46	30.99	1.160	1.220
Z	150.87	153.92	5.940	6.060

CASE 157A-01



NOTE:
1. WT ≈ 2.6 kg (5 lb., 12 oz.)

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	201.68	207.72	7.940	8.060
B	188.98	192.02	7.440	7.560
C	93.73	96.77	3.690	3.810
D	24.89	25.91	0.980	1.020
E	2.79	3.56	0.110	0.140
F	30.23	33.27	1.190	1.310
G	157.23	160.27	6.190	6.310
H	11.94	13.46	0.470	0.530
J	9.14	9.91	0.360	0.390
K	24.89	25.91	0.980	1.020
N	125.48	128.52	4.940	5.060
P	1/4-20 UNC-2A			
Q	9.93	10.69	0.391	0.421
R	4.45	5.21	0.175	0.205
S	97.03	100.08	3.820	3.940
V	42.93	45.97	1.690	1.810
W	9.93	10.69	0.391	0.421
X	16.76	18.29	0.660	0.720
Y	29.46	30.99	1.160	1.220
Z	150.87	153.92	5.940	6.060

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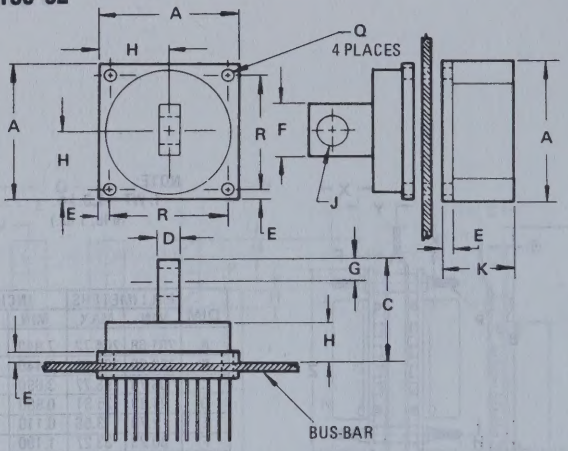
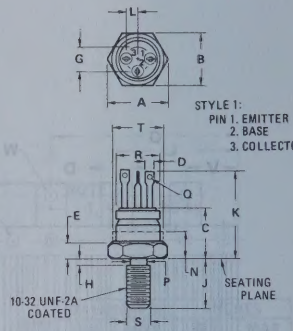
CASE 159-02



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	78.74	86.36	3.100	3.400
C	57.40	61.47	2.260	2.420
D	8.89	16.51	0.350	0.650
E	5.08	6.35	0.200	0.250
F	27.94	33.56	1.100	1.400
G	7.62	8.89	0.300	0.350
H	20.32	23.11	0.800	0.910
J	14.02	14.53	0.552	0.572
K	53.34	60.96	2.100	2.400
Q	6.88	7.39	0.271	0.291
R	69.58	73.66	2.700	2.900

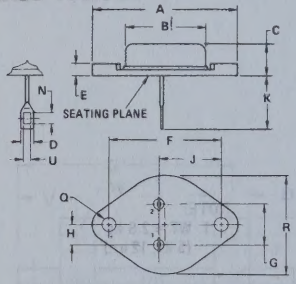
CASE 160-03 TO-59



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
B	10.77	11.10	0.424	0.437
C	8.13	11.89	0.320	0.468
E	2.29	3.81	0.090	0.150
G	4.70	5.46	0.185	0.215
H	–	1.98	–	0.078
J	10.16	11.56	0.400	0.455
K	14.48	19.38	0.570	0.763
L	2.29	2.79	0.090	0.110
N	–	6.35	–	0.250
P	4.14	4.80	0.163	0.189
Q	1.02	1.65	0.040	0.065
R	8.08	9.65	0.318	0.380
S	4.212	4.310	0.1658	0.1697
T	9.65	11.10	0.380	0.437

All JEDEC dimensions and notes apply
Collector isolated from case.

CASE 161-01

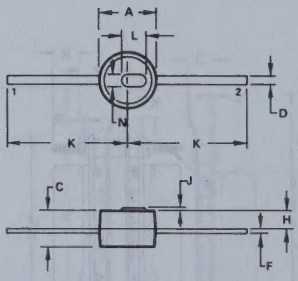


STYLE 1:
PIN 1. BASE
2. EMITTER
CASE: COLLECTOR

NOTE:
1. LEADS ARE MASHED & PIERCED.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	39.37	–	1.550
B	–	21.08	–	0.830
C	–	9.14	–	0.360
D	–	3.56	–	0.140
E	–	3.43	–	0.135
F	29.90	30.40	1.177	1.197
G	10.67	11.18	0.420	0.440
H	5.33	5.59	0.210	0.220
J	16.64	17.15	0.655	0.675
K	15.49	17.27	0.610	0.680
N	3.05	3.30	0.120	0.130
Q	3.84	4.09	0.151	0.161
R	–	26.67	–	1.050
U	1.83	–	0.072	–

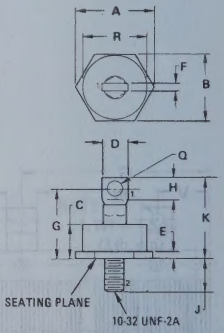
CASE 166-02



STYLE 1:
PIN 1. ANODE
2. CATHODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.98	2.34	0.078	0.092
C	1.22	1.47	0.048	0.058
D	0.25	0.41	0.010	0.016
F	0.10	0.15	0.004	0.006
H	0.51	0.76	0.020	0.030
J	0.03	0.08	0.001	0.003
K	4.19	4.45	0.165	0.175
L	0.89	1.14	0.035	0.045
N	0.38	0.64	0.015	0.025

CASE 167-01

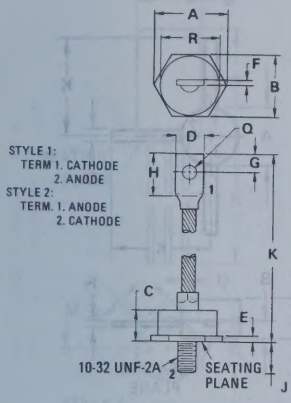


STYLE 1:
TERM. 1. CATHODE
2. ANODE
STYLE 2:
TERM. 1. ANODE
2. CATHODE

NOTES:
1. CRIMPED LUG
2. ANGULAR ORIENTATION OF LUG UNDEFINED.

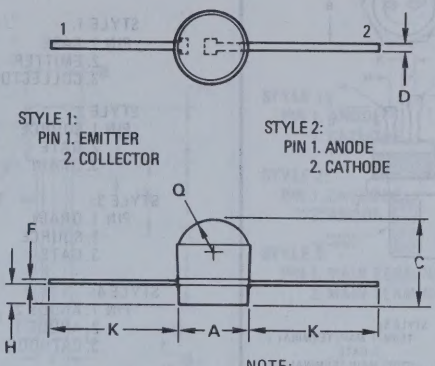
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	36.83	–	1.450
B	31.37	32.13	1.235	1.265
C	13.72	17.91	0.540	0.705
D	12.70	13.34	0.500	0.525
E	2.92	3.43	0.115	0.135
F	2.67	3.43	0.105	1.135
G	29.21	34.29	1.150	1.350
H	12.70	–	0.500	–
J	10.77	12.70	0.424	0.500
K	34.93	44.45	1.375	1.750
Q	6.10	6.60	0.240	0.260
R	–	30.48	–	1.200

CASE 168-01



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	36.83	–	1.450
B	31.37	32.13	1.235	1.265
C	13.72	17.91	0.540	0.705
D	13.00	15.54	0.512	0.612
E	2.92	3.43	0.115	0.135
F	1.52	3.30	0.060	0.130
G	8.71	10.34	0.343	0.407
H	19.05	–	0.750	–
J	10.77	12.70	0.424	0.500
K	127.00	146.05	5.000	5.750
Q	6.76	7.52	0.266	0.296
R	–	30.48	–	1.200

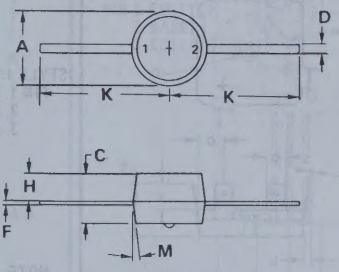
CASE 171-01



NOTE:
1. LEAD IDENTIFICATION: SQUARE BONDING PAD OVER PIN 2.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	3.56	4.06	0.140	0.160
C	4.57	5.33	0.180	0.210
D	0.33	0.48	0.013	0.019
F	0.23	0.28	0.009	0.011
H	1.02	1.27	0.040	0.050
K	6.35	–	0.250	–
Q	1.91 NOM		0.075 NOM	

CASE 173-01

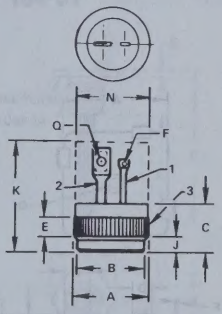


PIN 1. EMITTER
2. COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.98	2.34	0.078	0.092
C	1.22	1.47	0.048	0.058
D	0.25	0.41	0.010	0.016
F	0.10	0.15	0.004	0.006
H	0.51	0.76	0.020	0.030
K	4.06	–	0.160	–
M	3°	7°	3°	7°

NOTE:
1. INDEX BUTTON ON PACKAGE BOTTOM IS 0.25/0.51 mm (0.010/0.020) DIA & 0.05/0.13 mm (0.002/0.005) OFF SURFACE.

CASE 174-02 TO-203AA



STYLE 1:
TERM. 1. GATE
2. CATHODE
3. ANODE
STYLE2:
TERM. 1. GATE
2. ANODE
3. CATHODE
STYLE 3:
TERM. 1. GATE
2. MAIN TERMINAL 1
3. MAIN TERMINAL 2

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	12.726	12.827	0.501	0.505
B	11.811	12.065	0.465	0.475
C	8.39	9.65	0.330	0.380
E	2.54	–	0.100	–
F	0.89	1.72	0.035	0.068
J	2.04	2.46	0.080	0.097
K	–	20.32	–	0.800
N	–	12.95	–	0.510
Q	1.66	2.28	0.065	0.090

All JEDEC dimensions and notes apply

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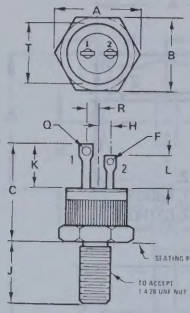
CASE 175-01



STYLE 1:
TERM. 1. CATHODE
2. GATE
STUD : ANODE

STYLE 2:
TERM. 1. ANODE
2. GATE
STUD: CATHODE

STYLE 3:
TERM. 1. MAIN TERMINAL 1
2. GATE
STUD: MAIN TERMINAL 2

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	15.34	15.60	0.604	0.614
B	14.00	14.20	0.551	0.559
C	20.70	24.13	0.815	0.950
F	1.40	1.65	0.055	0.065
H	2.29 REF		0.090 REF	
J	10.67	11.56	0.420	0.455
K	9.78	10.54	0.385	0.415
L	6.99	7.75	0.275	0.305
Q	2.03	2.41	0.080	0.095
R	1.65 REF		0.065 REF	
T	12.70	12.83	0.500	0.505

CASE 176-01

STYLE 1:
PIN 1. BASE
2. EMITTER
3. COLLECTOR

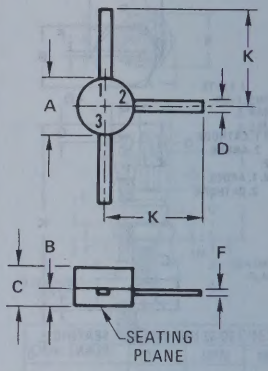
STYLE 2:
PIN 1. SOURCE
2. GATE
3. DRAIN

STYLE 3:
PIN 1. DRAIN
2. SOURCE
3. GATE

STYLE 4:
PIN 1. ANODE 2
2. ANODE 1
3. CATHODE

STYLE 5:
PIN 1. CATHODE
2. NOT CONNECTED
3. ANODE

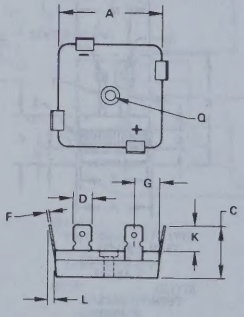
STYLE 6:
PIN 1. CATHODE
2. ANODE
3. ANODE



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.03	2.67	0.080	0.105
B	0.51	0.76	0.020	0.030
C	1.27	2.03	0.050	0.080
D	0.25	0.41	0.010	0.016
F	0.08	0.15	0.003	0.006
K	4.06	4.57	0.160	0.180

NOTE:
A Tolerance of .25 mm (.010) must be allowed at point leads protrude from package for glass run over.

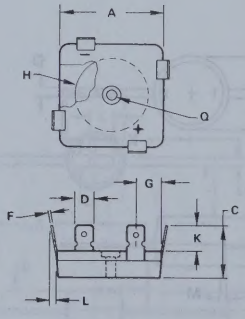
CASE 179-01



NOTE:
1. HOLE "Q" IS COUNTER SUNK FOR #6 SCREW, 7.37 mm (0.290) MAXIMUM DIA., 1.52/2.79 mm (0.060/0.110) DEEP.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	31.37	31.88	1.235	1.255
C	16.76	19.30	0.660	0.760
D	6.22	6.48	0.245	0.255
F	0.74	0.86	0.029	0.034
G	8.64	10.16	0.340	0.400
J	2.16	2.54	0.085	0.100
K	7.49	9.52	0.295	0.375
L	–	1.90	–	0.075
Q	3.56	3.94	0.140	0.155

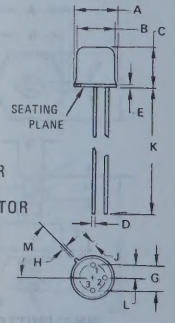
CASE 179-02



NOTE:
1. HOLE "Q" IS COUNTER SUNK FOR #6 SCREW , 7.37 mm (0.290) MAXIMUM DIA., 1.52/2.79 mm (0.060/0.110) DEEP.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	31.37	31.88	1.235	1.255
C	16.76	19.30	0.660	0.760
D	6.22	6.48	0.245	0.255
F	0.74	0.86	0.029	0.034
G	8.64	10.16	0.340	0.400
H	21.82	23.62	0.859	0.930
J	2.16	2.54	0.085	0.100
K	7.49	9.52	0.295	0.375
L	–	1.90	–	0.075
Q	3.56	3.94	0.140	0.155

CASE 180-01



STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR

NOTE:
1. LEADS WITHIN 0.13 mm (0.005) RAD OF TRUE POSITION AT SEATING PLANE, AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.51	9.40	0.335	0.370
B	7.87	8.64	0.310	0.340
C	6.10	9.91	0.240	0.390
D	0.56	0.71	0.022	0.028
E	0.23	3.18	0.009	0.125
G	5.08 BSC		0.200 BSC	
H	0.64	0.89	0.025	0.035
J	0.74	1.14	0.029	0.045
K	38.10		1.500	
L	2.54 BSC		0.100 BSC	
M	45° BSC		45° BSC	

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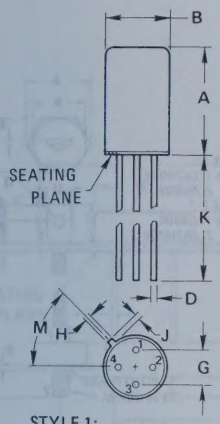
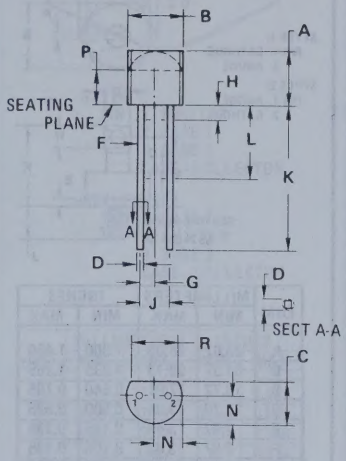
CASE 181-02



STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR
4. ZENER

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	17.02	–	0.670
B	9.14	9.78	0.360	0.385
D	0.41	0.48	0.016	0.019
G	4.83	5.33	0.190	0.210
H	0.71	0.86	0.028	0.034
J	0.51	–	0.020	–
K	38.10	–	1.500	–
M	42°	48°	42°	48°

CASE 182-02 TO-92



STYLE 1:
PIN 1. ANODE
2. CATHODE

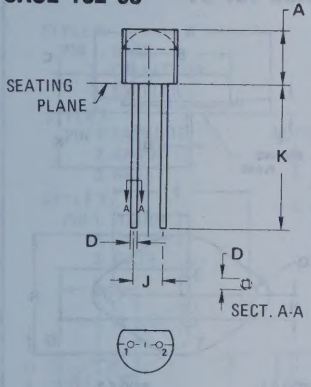
STYLE 2:
PIN 1. CATHODE
2. ANODE

STYLE 3:
PIN 1. MAIN TERMINAL 1
2. MAIN TERMINAL 2

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.32	5.33	0.170	0.210
B	4.45	5.21	0.175	0.205
C	3.18	4.19	0.125	0.165
D	0.356	0.533	0.014	0.021
F	0.407	0.482	0.016	0.019
G	1.27 BSC		0.050 BSC	
H	–	1.27	–	0.050
J	2.54 BSC		0.100 BSC	
K	12.70	–	0.500	–
L	6.35	–	0.250	–
N	2.03	2.66	0.080	0.105
P	2.93	–	0.115	–
R	3.43	–	0.135	–

All JEDEC dimensions and notes apply

CASE 182-03



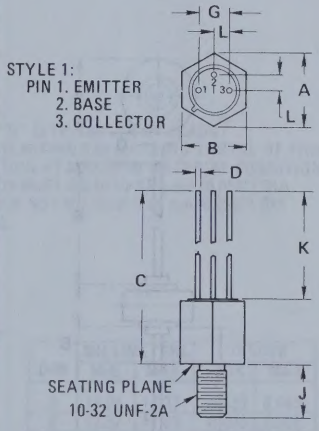
STYLE 1:
PIN 1. ANODE
2. CATHODE

STYLE 2:
PIN 1. CATHODE
2. ANODE

STYLE 3:
PIN 1. MAIN TERMINAL 1
2. MAIN TERMINAL 2

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.45	4.70	0.175	0.185
D	0.41	0.48	0.016	0.019
J	2.29	2.79	0.090	0.110
K	12.70	–	0.500	–

CASE 183-01

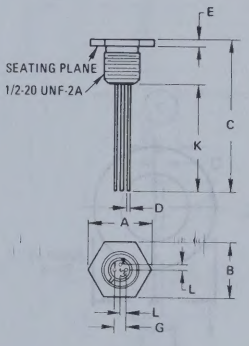


STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	12.45	12.95	0.490	0.510
B	10.85	11.35	0.427	0.447
C	49.35	–	1.943	–
D	0.56	0.71	0.022	0.028
G	4.83	5.33	0.190	0.210
J	8.76	9.27	0.345	0.365
K	38.10	–	1.500	–
L	2.41	2.67	0.095	0.105

NOTES:
1. COLLECTOR CONNECTED TO CASE
2. THE ORIENTATION OF THE LEADS IN RELATION TO THE HEX FLATS IS NOT CONTROLLED.

CASE 184-01



STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	22.23	–	0.875
B	18.80	19.30	0.740	0.760
C	52.53	–	2.068	–
D	0.56	0.71	0.022	0.028
E	2.11	2.62	0.083	0.103
G	4.57	5.59	0.180	0.220
K	38.10	–	1.500	–
L	2.29	2.79	0.090	0.110

NOTES:
1. THE ORIENTATION OF THE LEAD IN RELATION TO THE HEX IS UNCONTROLLED.
2. COLLECTOR CONNECTED TO CASE
3. THREAD RELIEF IS 2.29 mm (0.090) MAX BY 10.92 mm (0.430) DIA NOMINAL.

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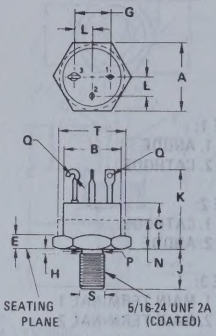
CASE 188-01 TO-63

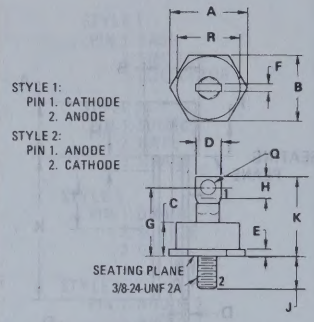


STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	21.72	22.23	0.855	0.875
B	18.92	19.69	0.745	0.775
C	12.19	13.59	0.480	0.535
E	2.29	4.24	0.090	0.167
G	12.32	13.08	0.485	0.515
H	–	2.67	–	0.105
J	11.68	12.57	0.460	0.495
K	23.80	26.16	0.937	1.030
L	6.10	6.60	0.240	0.260
N	–	7.62	–	0.300
P	7.06	7.92	0.278	0.312
Q	1.52	2.67	0.060	0.105
S	7.127	7.249	0.2806	0.2854
T	19.69	22.23	0.775	0.875

All JEDEC notes and dimensions apply.

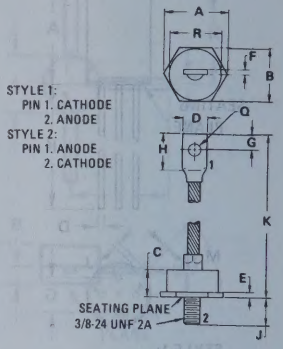
CASE 189-01



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	33.02	36.83	1.300	1.450
B	31.37	32.13	1.235	1.265
C	13.72	17.91	0.540	0.705
D	12.70	13.34	0.500	0.525
E	2.92	3.43	0.115	0.135
F	2.67	3.43	0.105	0.135
G	29.21	34.29	1.150	1.350
H	12.70	16.76	0.500	0.660
J	15.06	16.69	0.593	0.657
K	34.93	44.45	1.375	1.750
Q	6.10	6.60	0.240	0.260
R	–	30.48	–	1.200

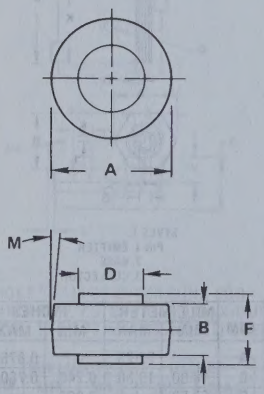
NOTES:
1. TERM. 1 CRIMPED LUG.
2. ANGULAR ORIENTATION OF LUG UNDEFINED
3. DIM "H" LUG FLAT ZONE.

CASE 190-01



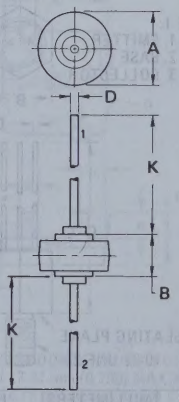
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	36.83	–	1.450
B	31.37	32.13	1.235	1.265
C	13.72	17.91	0.540	0.705
D	13.00	15.54	0.512	0.612
E	2.92	3.43	0.115	0.135
F	1.52	3.30	0.060	0.130
G	8.71	10.34	0.343	0.407
H	19.05	22.86	0.750	0.900
J	15.06	16.69	0.593	0.657
K	127.00	139.70	5.000	5.500
Q	6.76	7.52	0.266	0.296
R	–	30.48	–	1.200

CASE 193-03



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	10.03	10.29	0.395	0.405
B	4.19	4.45	0.165	0.175
D	5.54	5.64	0.218	0.222
F	5.94	6.25	0.234	0.246
M	5° NOM		5° NOM	

CASE 194-01

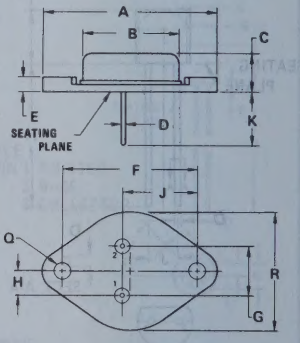


STYLE 1:
PIN 1. CATHODE
2. ANODE

NOTE:
1. CATHODE SYMBOL ON PKG.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	10.03	10.29	0.395	0.405
B	5.94	6.25	0.234	0.246
D	1.27	1.35	0.050	0.053
K	25.15	25.65	0.990	1.010

CASE 197-01

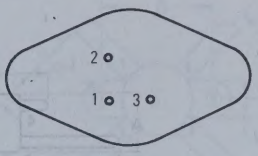


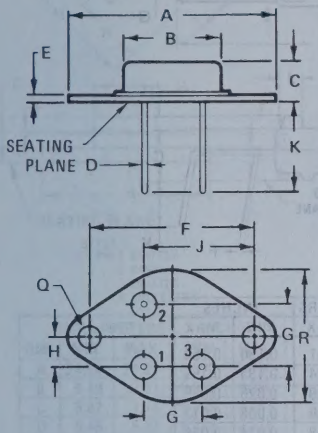
STYLE 1:
PIN 1. BASE
2. EMITTER
CASE. COLLECTOR

STYLE 2:
PIN 1. EMITTER
2. BASE
CASE. COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	38.35	39.37	1.510	1.550
B	19.30	21.08	0.760	0.830
C	6.35	7.62	0.250	0.300
D	1.45	1.60	0.057	0.063
E	–	3.43	–	0.135
F	29.90	30.40	1.177	1.197
G	10.67	11.18	0.420	0.440
H	5.21	5.72	0.205	0.225
J	16.64	17.15	0.655	0.675
K	11.18	12.19	0.440	0.480
Q	3.84	4.09	0.151	0.161
R	24.89	26.67	0.980	1.050

CASE 198-01





STYLE 1:
PIN 1. EMITTER
2. BASE 1
3. BASE 2
CASE - COLLECTOR

STYLE 2:
PIN 1. BASE 1
2. EMITTER
3. BASE 2
CASE - COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	31.80	–	1.252
B	11.94	12.70	0.470	0.500
C	6.35	8.64	0.250	0.340
D	0.71	0.86	0.028	0.034
E	1.27	1.91	0.050	0.075
F	24.33	24.43	0.958	0.962
G	4.83	5.33	0.190	0.210
H	2.41	2.67	0.095	0.105
J	14.48	14.99	0.570	0.590
K	9.14	10.16	0.360	0.400
Q	3.61	3.86	0.142	0.152
R	–	18.16	–	0.715

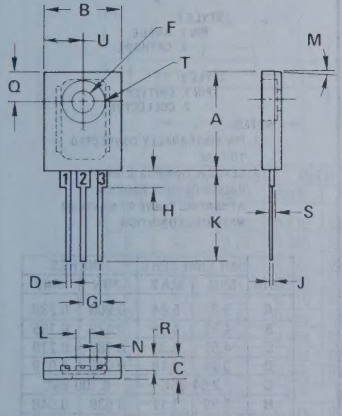
CASE 199-04

STYLE 1:
PIN 1. BASE
2. COLLECTOR
3. EMITTER

STYLE 2:
PIN 1. CATHODE
2. ANODE
3. GATE

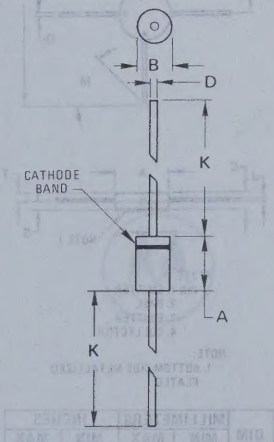
STYLE 3:
PIN 1. ANODE 1
2. ANODE 2
3. GATE

NOTES:
1. DIM "G" IS TO CENTER OF LEADS
2. LEADS WITHIN 0.25 mm (0.010") TOTAL OF TRUE POSITION AT MAXIMUM MATERIAL CONDITION.
3. LEADS MUST GO INTO 0.86 mm (0.034") DIA HOLE & NOT GO INTO 0.64 mm (0.025") DIA HOLE.



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	16.08	16.33	0.633	0.643
B	12.57	12.83	0.495	0.505
C	3.18	3.43	0.125	0.135
D	0.51	0.76	0.020	0.030
F	3.61	3.86	0.142	0.152
G	2.54 BSC		0.100 BSC	
H	2.67	2.92	0.105	0.115
J	0.43	0.69	0.017	0.027
K	14.73	14.99	0.580	0.590
L	2.16	2.41	0.085	0.095
M	3° TYP		3° TYP	
N	1.47	1.73	0.058	0.068
Q	4.78	5.03	0.188	0.198
R	1.91	2.16	0.075	0.085
S	0.81	0.86	0.032	0.034
T	6.99	7.24	0.275	0.285
U	6.22	6.48	0.245	0.255

CASE 205-01



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.54	3.81	0.100	0.150
B	2.34	2.64	0.092	0.104
D	0.48	0.53	0.019	0.021
K	27.51	–	1.083	–

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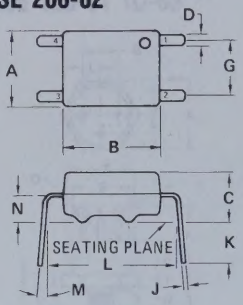
CASE 206-02

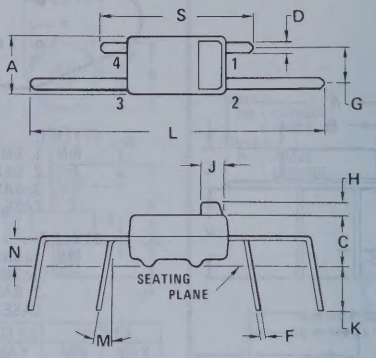


STYLE 1: OBSOLETE
STYLE 2:
PIN 1. CATHODE
2. ANODE 1
3. ANODE 2
4. ANODE 3

NOTES:
1. DIM "L" TO CENTER OF LEADS AT SEATING PLANE.

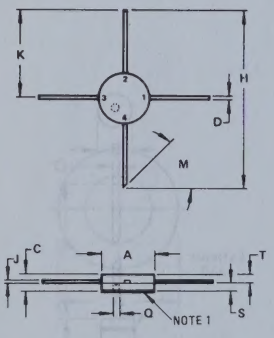
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.21	5.59	0.205	0.220
B	6.60	7.11	0.260	0.280
C	3.43	4.06	0.135	0.160
D	0.63	0.89	0.025	0.035
G	3.94	4.19	0.155	0.165
J	0.20	0.30	0.008	0.012
K	2.54	3.56	0.100	0.140
L	9.02	9.27	0.355	0.365
M	–	10^0	–	10^0
N	1.14	1.40	0.045	0.055

CASE 206A-01



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	3.30	3.81	0.130	0.150
C	3.43	3.94	0.135	0.155
D	0.64	0.89	0.025	0.035
F	0.20	0.30	0.008	0.012
G	1.88	2.18	0.074	0.086
H	0.64	0.89	0.025	0.035
J	1.50	1.75	0.059	0.069
K	2.92	3.18	0.115	0.125
L	15.75	16.76	0.620	0.660
M	–	10^0	–	10^0
N	1.78	2.03	0.070	0.080
S	8.64	9.65	0.340	0.380

CASE 207A-01

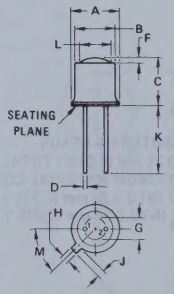


STYLE 1:
PIN 1. EMITTER
2. BASE
3. EMITTER
4. COLLECTOR

NOTE:
1. BOTTOM SIDE METALLIZED PLATED

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.99	7.37	0.275	0.290
C	2.79	3.30	0.110	0.130
D	0.64	0.89	0.025	0.035
H	37.73	36.27	1.328	1.428
J	0.33	0.43	0.013	0.017
K	16.87	18.14	0.664	0.714
M	40^0	50^0	40^0	50^0
Q	0.69	0.84	0.027	0.033
S	1.40	1.65	0.055	0.065
T	1.40	1.65	0.055	0.065

CASE 209-01

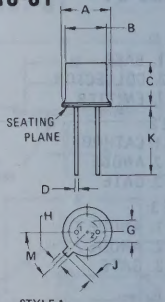


STYLE 1:
PIN 1. ANODE
PIN 2. CATHODE

NOTES:
1. PIN 2 INTERNALLY CONNECTED TO CASE
2. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.31	5.84	0.209	0.230
B	4.52	4.95	0.178	0.195
C	5.08	6.35	0.200	0.250
D	0.41	0.48	0.016	0.019
F	0.51	1.02	0.020	0.040
G	2.54 BSC		0.100 BSC	
H	0.99	1.17	0.039	0.046
J	0.84	1.22	0.033	0.048
K	12.70	–	0.500	–
L	3.35	4.01	0.132	0.158
M	45^0 BSC		45^0 BSC	

CASE 210-01



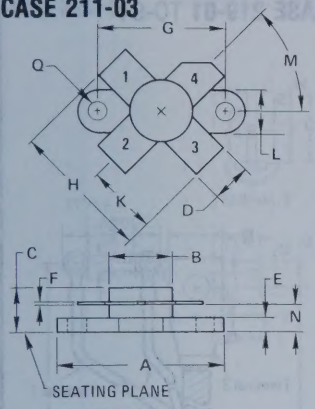
STYLE 1:
PIN 1. ANODE
2. CATHODE

STYLE 2:
PIN 1. EMITTER
2. COLLECTOR

NOTES:
1. PIN 2 INTERNALLY CONNECTED TO CASE
2. LEADS WITHIN 0.13 (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.31	5.84	0.209	0.230
B	4.52	4.95	0.178	0.195
C	4.57	5.33	0.180	0.210
D	0.41	0.48	0.016	0.019
G	2.54 BSC		0.100 BSC	
H	0.99	1.17	0.039	0.046
J	0.84	1.22	0.033	0.048
K	12.70	–	0.500	–
M	45^0 BSC		45^0 BSC	

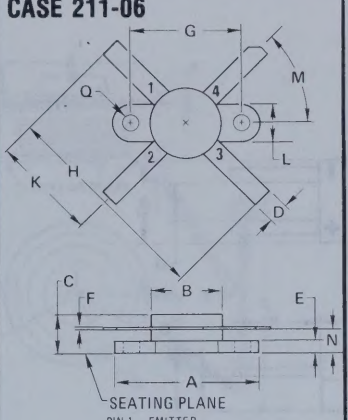
CASE 211-03



STYLE 1:
PIN 1. EMITTER
2. BASE
3. EMITTER
4. COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	24.64	24.89	0.970	0.980
B	9.40	9.91	0.370	0.390
C	5.82	7.14	0.229	0.281
D	5.46	5.97	0.215	0.235
E	2.16	2.67	0.085	0.105
F	0.10	0.15	0.004	0.006
G	18.29	18.54	0.720	0.730
H	21.59	22.10	0.850	0.870
K	10.80	11.05	0.425	0.435
L	6.22	6.48	0.245	0.255
M	40°	50°	40°	50°
N	3.81	4.57	0.150	0.180
Q	2.87	3.30	0.113	0.130

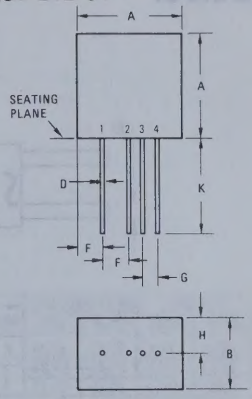
CASE 211-06



PIN 1. EMITTER
2. BASE
3. EMITTER
4. COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	24.64	24.89	0.970	0.980
B	11.81	12.95	0.465	0.510
C	5.82	6.98	0.229	0.275
D	2.16	3.94	0.085	0.155
E	2.13	2.54	0.084	0.100
F	0.10	0.15	0.004	0.006
G	18.29	18.54	0.720	0.730
H	35.56	38.10	1.400	1.500
K	17.78	19.05	0.700	0.750
L	6.22	6.48	0.245	0.255
M	40°	50°	40°	50°
N	3.66	4.52	0.144	0.178
Q	2.92	3.18	0.115	0.125

CASE 212-01

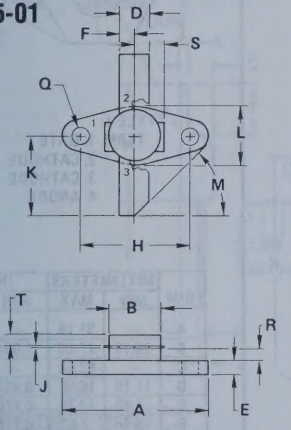


STYLE 1:
PIN 1. ZENER
2. EMITTER
3. BASE
4. COLLECTOR

NOTES:
1. DIM "G" APPLIES BETWEEN LEADS 2 & 3
2. DIM "F" & "G" TO BE MEASURED AT SEATING PLANE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.65	10.41	0.380	0.410
B	7.62	8.13	0.300	0.320
D	0.46	0.56	0.018	0.022
F	2.29	2.79	0.090	0.110
G	1.02	1.52	0.040	0.060
H	3.68	4.19	0.145	0.165
K	9.53	–	0.375	–

CASE 215-01



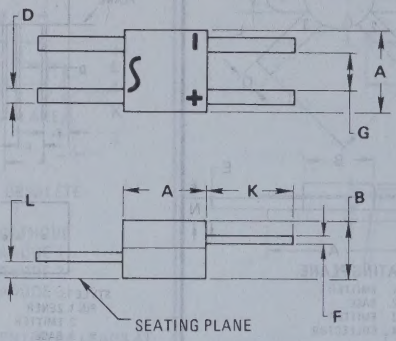
STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR

STYLE 2:
PIN 1. BASE
2. EMITTER
3. COLLECTOR

NOTE:
1. DIM "Q" IS DIA.

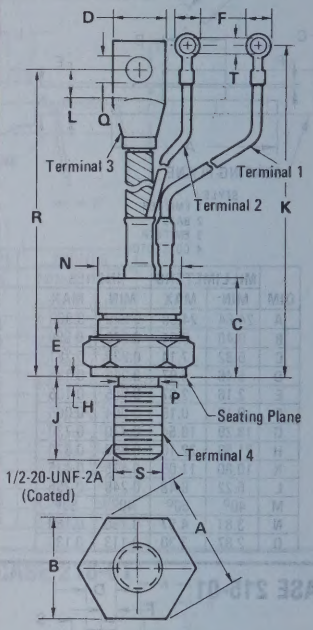
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	21.08	21.59	0.830	0.850
B	9.27	9.78	0.365	0.385
D	5.59	5.84	0.220	0.230
E	2.03	2.41	0.080	0.095
F	2.79	2.92	0.110	0.115
H	15.11	15.37	0.595	0.605
J	0.10	0.15	0.004	0.006
K	13.08	13.59	0.515	0.535
L	9.91	10.41	0.390	0.410
M	45°	NOM	45°	NOM
Q	2.92	3.18	0.115	0.125
R	1.52	2.03	0.060	0.080
S	–	5.38	–	0.212
T	2.03	2.54	0.080	0.100

CASE 216-01



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.10	6.73	0.240	0.265
B	4.06	4.70	0.160	0.185
D	0.89	1.27	0.035	0.050
F	0.46	0.76	0.018	0.030
G	2.84 NOM		0.112 NOM	
K	6.60	7.11	0.260	0.280
L	1.27	1.78	0.050	0.070

CASE 219-01 TO-94

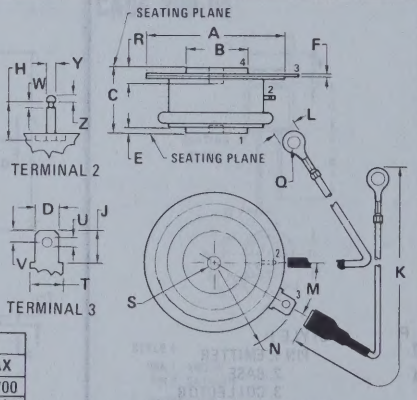


STYLE 1:
TERM. 1. GATE
2. CATHODE
3. CATHODE
4. ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	31.16	–	1.227
B	26.19	27.00	1.031	1.063
C	–	63.50	–	2.500
D	11.10	16.50	0.437	0.650
E	4.40	12.70	0.170	0.500
F	5.46	7.62	0.215	0.300
H	–	3.17	–	0.125
J	20.25	21.00	0.797	0.827
K	174.0	190.5	6.850	7.500
L	6.35	–	0.250	–
N	–	26.18	–	1.031
P	10.80	12.67	0.425	0.499
Q	6.61	7.87	0.260	0.310
R	146.7	159.1	5.775	6.265
S	11.733	11.874	0.4619	0.4675
T	3.56	3.81	0.140	0.150

All JEDEC dimensions and notes apply

CASE 220-03

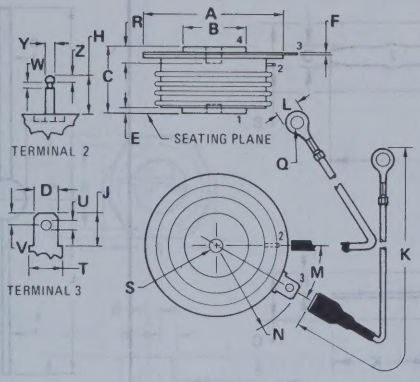


DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	36.07	43.18	1.420	1.700
B	18.54	29.59	0.730	1.165
C	12.45	15.24	0.490	0.600
D	4.72	4.85	0.186	0.191
E	0.25	2.54	0.010	0.100
F	0.35	0.48	0.014	0.019
H	2.54	–	0.100	–
J	6.22	19.30	0.245	0.760
K	202.69	206.12	7.980	8.115
L	–	7.62	–	0.300
M	20°	50°	20°	50°
N	15.49	28.58	0.610	1.125
Q	3.48	3.89	0.137	0.153
R	1.27	3.18	0.050	0.125
S	3.12	3.68	0.123	0.145
T	4.72	7.92	0.186	0.312
U	1.27	1.78	0.050	0.070
V	2.92	3.56	0.115	0.140
W	0.25	0.51	0.010	0.020
Y	1.45	1.50	0.057	0.059
Z	0.64	1.65	0.025	0.065

STYLE 1:
1. ANODE
2. GATE
3. CATHODE
4. CATHODE

NOTES:
1. SURFACES 1 & 4 FLAT WITHIN 0.0015 PER INCH
2. PACKAGE CONTOUR OPTIONAL BETWEEN TERM 1 & 2 AND BETWEEN TERM 2 & 3 WITHIN A. TERMINALS 2 AND 3 MUST BE LOCATED TO MAKE THE OUTLINE NON-SYMMETRICAL.
3. H MINIMUM IS FOR CONNECTOR CLEARANCE. MAY BE MEASURED TO BOTTOM OF A COUNTER-BORE IN INSULATOR.
4. TERMINAL 2 IS ROUND TYPE, AND TERMINAL 3 IS TAB TYPE.
5. DIM "K" APPLIES TO BOTH LEADS.
6. DIMENSIONS TO DIA OF SURFACE 1 ALSO APPLY TO SURFACE 4.

CASE 220-04

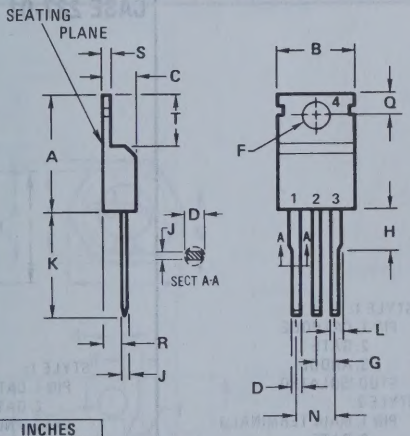


STYLE 1:
1. ANODE
2. GATE
3. CATHODE
4. CATHODE

DIM	MILLIMETERS MIN	MILLIMETERS MAX	INCHES MIN	INCHES MAX
A	55.88	63.50	2.200	2.500
B	26.19	38.10	1.031	1.500
C	25.40	27.05	1.000	1.065
D	4.72	4.85	0.186	0.191
E	0.76	2.79	0.030	0.110
F	0.35	0.48	0.014	0.019
H	2.54	–	0.100	–
J	6.22	19.30	0.245	0.760
K	202.69	206.12	7.980	8.115
L	–	7.62	–	0.300
M	15°	50°	15°	50°
N	–	36.45	–	1.435
Q	3.48	3.89	0.137	0.153
R	1.27	4.06	0.050	0.160
S	3.12	3.68	0.123	0.145
T	4.72	7.92	0.186	0.312
U	1.27	1.78	0.050	0.070
V	2.92	3.56	0.115	0.140
W	0.25	0.51	0.010	0.020
Y	1.45	1.50	0.057	0.059
Z	0.64	1.65	0.025	0.065

NOTES:
1. SURFACES 1 & 4 FLAT WITHIN 0.0015 PER INCH
2. PACKAGE CONTOUR OPTIONAL BETWEEN TERM 1 & 2 AND BETWEEN TERM 2 & 3 WITHIN A. TERMINALS 2 AND 3 MUST BE LOCATED TO MAKE THE OUTLINE NON-SYMMETRICAL.
3. H MINIMUM IS FOR CONNECTOR CLEARANCE. MAY BE MEASURED TO BOTTOM OF A COUNTER-BORE IN INSULATOR
4. TERMINAL 2 IS ROUND TYPE, AND TERMINAL 3 IS TAB TYPE.
5. DIM "K" APPLIES TO BOTH LEADS.
6. DIMENSIONS TO DIA OF SURFACE 1 ALSO APPLY TO SURFACE 4.

CASE 221-02
TO-220AB



DIM	MILLIMETERS MIN	MILLIMETERS MAX	INCHES MIN	INCHES MAX
A	14.23	15.87	0.560	0.625
B	9.66	10.66	0.380	0.420
C	3.56	4.82	0.140	0.190
D	0.51	1.14	0.020	0.045
F	3.531	3.733	0.139	0.147
G	2.29	2.79	0.090	0.110
H	–	6.35	–	0.250
J	0.31	1.14	0.012	0.045
K	12.70	14.27	0.500	0.562
L	1.14	1.77	0.045	0.070
N	4.83	5.33	0.190	0.210
Q	2.54	3.04	0.100	0.120
R	2.04	2.92	0.080	0.115
S	0.51	1.39	0.020	0.055
T	5.85	6.85	0.230	0.270

All JEDEC dimensions and notes apply

STYLE 1:
PIN 1. CATHODE
2. ANODE
3. GATE
4. ANODE

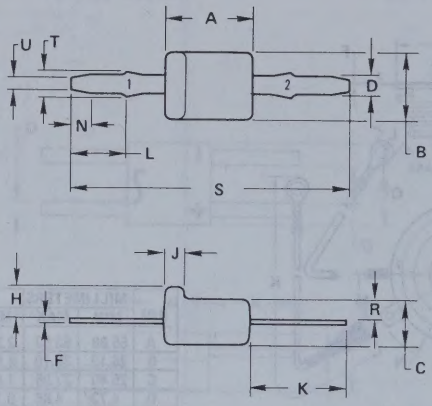
STYLE 2:
PIN 1. MAIN TERMINAL 1
2. MAIN TERMINAL 2
3. GATE
4. MAIN TERMINAL 2

STYLE 3:
PIN 1. CATHODE
2. ANODE
3. GATE
4. NEUTRAL

STYLE 4:
PIN 1. MAIN TERMINAL 1
2. MAIN TERMINAL 2
3. GATE
4. NEUTRAL

9

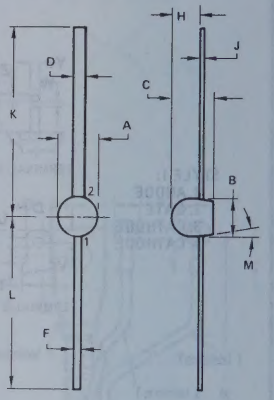
CASE 226-01



PIN 1. CATHODE
2. ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	3.86	4.11	0.152	0.162
B	2.92	3.18	0.115	0.125
C	1.91	2.16	0.075	0.085
D	0.64	0.89	0.025	0.035
F	0.08	0.18	0.003	0.007
H	1.30	1.55	0.051	0.061
J	0.64	0.89	0.025	0.035
K	4.06	4.32	0.160	0.170
L	2.36	2.62	0.093	0.103
N	1.12	1.37	0.044	0.054
R	0.79	1.04	0.031	0.041
S	11.99	12.75	0.472	0.502
T	1.14	1.40	0.045	0.055
U	0.43	0.69	0.017	0.027

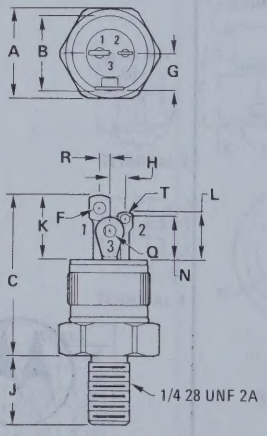
CASE 234-03



PIN 1. ANODE
2. CATHODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.34	2.59	0.092	0.102
B	2.11	2.36	0.083	0.093
C	2.39	2.64	0.094	0.104
D	0.64	0.74	0.025	0.029
F	0.46	0.56	0.018	0.022
H	1.57	1.83	0.062	0.072
J	0.20	0.30	0.008	0.012
K	11.30	12.70	0.445	0.500
L	10.29	10.54	0.405	0.415
M	9°	11°	9°	11°

CASE 235-01

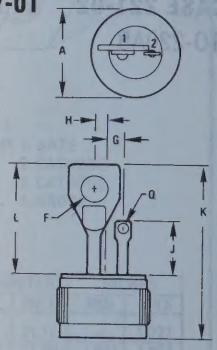


STYLE 1:
PIN 1. CATHODE
2. GATE
3. ANODE
STUD-ISOLATED
STYLE 2:
PIN 1. MAIN TERMINAL 1
2. GATE
3. MAIN TERMINAL 2
STUD-ISOLATED

NOTE:
1. DIM "H", "R" & "G" TO BE MEASURED AT CAN.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	14.00	14.20	0.551	0.559
B	12.73	12.83	0.501	0.505
C	–	26.16	–	1.030
F	2.03	2.41	0.080	0.095
G	–	6.48	–	0.255
H	2.16	2.41	0.085	0.095
J	10.67	11.56	0.420	0.455
K	9.78	10.54	0.385	0.415
L	6.99	7.75	0.275	0.305
N	6.48	6.99	0.255	0.275
Q	3.43	3.81	0.135	0.150
R	1.52	1.78	0.060	0.070
T	1.40	1.65	0.055	0.065

CASE 237-01



STYLE 1:
PIN 1. CATHODE
2. GATE
CASE. ANODE
STYLE 2:
PIN 1. MAIN TERMINAL 1
2. GATE
CASE. MAIN TERMINAL 2

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	12.73	12.83	0.501	0.505
F	–	4.06	–	0.160
G	2.16	2.41	0.085	0.095
H	1.52	1.78	0.060	0.070
J	6.99	7.75	0.275	0.305
K	–	26.67	–	1.050
L	–	17.02	–	0.670
Q	1.40	1.65	0.055	0.065

NOTE:
1. DIM "G" & "H" TO BE MEASURED AT CAN.

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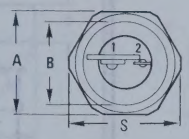
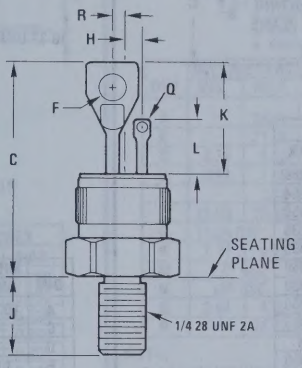
CASE 238-01





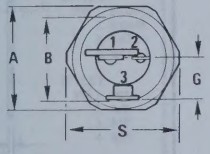
STYLE 1:
PIN 1. CATHODE
2. GATE
STUD. ANODE

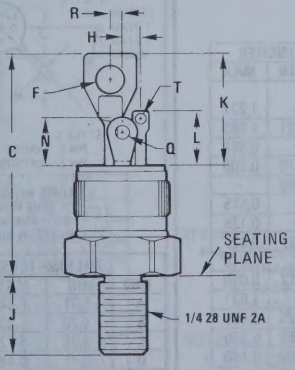
STYLE 2:
PIN 1. MAIN TERMINAL 1
2. GATE
STUD. MAIN TERMINAL 2

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	14.00	14.20	0.551	0.559
B	12.73	12.83	0.501	0.505
C	–	30.23	–	1.190
F	–	4.06	–	0.160
H	2.16	2.41	0.085	0.095
J	10.67	11.56	0.420	0.455
K	–	17.02	–	0.670
L	6.99	7.75	0.275	0.305
Q	1.40	1.65	0.055	0.065
R	1.52	1.78	0.060	0.070
S	15.34	15.60	0.604	0.614

NOTE:
1. DIM "H" & "R" TO BE MEASURED AT CAN.

CASE 239-01





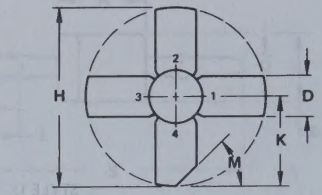
STYLE 1:
PIN 1. CATHODE
2. GATE
3. ANODE
STUD. ISOLATED

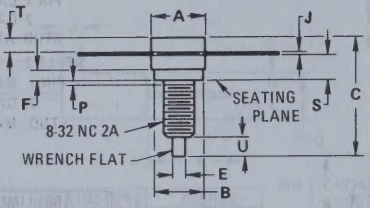
STYLE 2:
PIN 1. MAIN TERMINAL 1
2. GATE
3. MAIN TERMINAL 2
STUD. ISOLATED

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	14.00	14.20	0.551	0.559
B	12.73	12.83	0.501	0.505
C	–	32.51	–	1.280
F	–	4.06	–	0.160
G	–	6.48	–	0.255
H	2.16	2.41	0.085	0.095
J	10.67	11.56	0.420	0.455
K	–	17.02	–	0.670
L	6.99	7.75	0.275	0.305
N	6.48	6.99	0.255	0.275
Q	3.43	3.81	0.135	0.150
R	1.52	1.78	0.060	0.070
S	15.34	15.60	0.604	0.614
T	1.40	1.65	0.055	0.065

NOTE:
1. DIM "G", "H" & "R" TO BE MEASURED AT CAN.

CASE 244-03

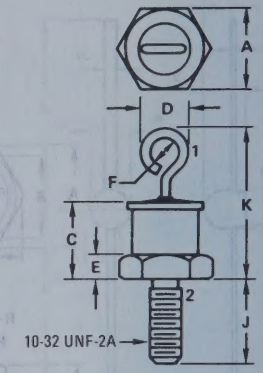




STYLE 1:
PIN 1. EMITTER
2. BASE
3. EMITTER
4. COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	7.06	7.26	0.278	0.286
B	6.25	6.45	0.246	0.254
C	14.99	16.51	0.590	0.650
D	5.46	5.97	0.215	0.235
E	1.40	1.65	0.055	0.065
F	1.52	1.75	0.060	0.069
H	22.10	23.62	0.870	0.930
J	0.10	0.15	0.004	0.006
K	11.05	11.81	0.435	0.465
M	45° NOM		45° NOM	
P	–	1.27	–	0.050
S	3.00	3.25	0.118	0.128
T	1.40	1.65	0.055	0.065
U	2.92	3.68	0.115	0.145

CASE 245-01

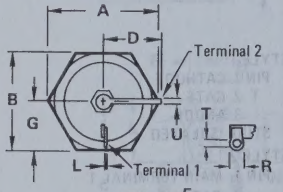


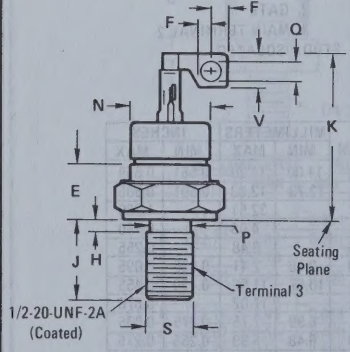
STYLE 1:
1. CATHODE
2. ANODE

STYLE 2:
1. ANODE
2. CATHODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	10.77	11.10	0.424	0.437
C	–	10.29	–	0.405
D	–	6.35	–	0.250
E	1.91	4.45	0.075	0.175
F	1.52	–	0.060	–
J	10.72	11.51	0.422	0.453
K	–	20.32	–	0.800

CASE 246-01 TO-83



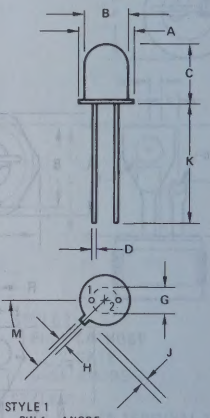


STYLE 1:
TERMINAL 1. GATE
2. CATHODE
3. ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	31.16	–	1.227
B	26.19	27.00	1.031	1.063
D	–	16.51	–	0.650
E	4.4	12.70	0.170	0.500
F	4.58	–	0.180	–
G	–	14.60	–	0.575
H	–	3.17	–	0.125
J	20.25	21.00	0.797	0.827
K	–	45.97	–	1.810
L	0.31	1.27	0.012	0.050
N	–	26.18	–	1.031
P	10.80	12.67	0.425	0.499
Q	4.58	6.60	0.180	0.260
R	2.93	4.06	0.115	0.160
S	11.733	11.874	0.4619	0.4675
T	1.53	2.03	0.060	0.080
U	1.53	2.92	0.060	0.115
V	9.2	11.9	0.360	0.470

All JEDEC dimensions and notes apply

CASE 247-01



STYLE 1
PIN 1. ANODE
PIN 2. CATHODE
NOTE:
1. LEADS WITHIN 0.13 mm (0.005) OF TRUE POSITION AT SEATING PLANE, AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.31	5.84	0.209	0.230
B	4.70	5.33	0.185	0.210
C	5.08	5.72	0.200	0.225
D	0.41	0.48	0.016	0.019
G	2.54 BSC		0.100 BSC	
H	0.91	1.17	0.036	0.046
J	0.71	1.22	0.028	0.048
K	12.70	–	0.500	–
M	45° BSC		45° BSC	

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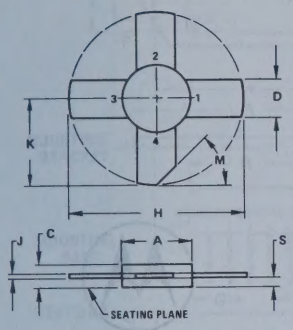
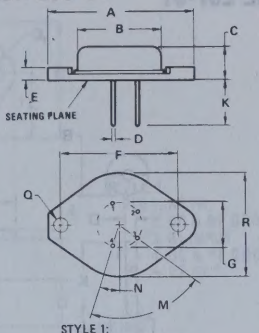
CASE 249-04



STYLE 1:
PIN 1. EMITTER
2. BASE
3. EMITTER
4. COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	7.06	7.26	0.278	0.286
C	2.84	3.45	0.112	0.136
D	5.46	5.97	0.215	0.235
H	22.10	23.62	0.870	0.930
J	0.10	0.15	0.004	0.006
K	11.05	11.81	0.435	0.465
M	45° NOM		45° NOM	
S	1.40	1.65	0.055	0.065

CASE 253-01

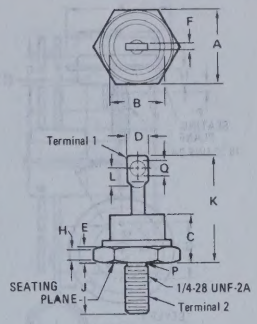


STYLE 1:
PIN 1. EMITTER 2
2. BASE 2
3. BASE 1
4. EMITTER 2

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	38.61	–	1.520
B	–	21.08	–	0.830
C	6.35	8.13	0.250	0.320
D	0.97	1.09	0.038	0.043
E	–	3.43	–	0.135
F	29.90	30.40	1.177	1.197
G	11.94 BSC		0.470 BSC	
K	7.11	8.13	0.280	0.320
M	72° BSC		72° BSC	
N	18° BSC		18° BSC	
Q	3.84	4.09	0.151	0.161
R	–	26.67	–	1.050

NOTE:
1. LEADS WITHIN 0.13 mm (0.005) DIA OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.

CASE 257-01 DO-5



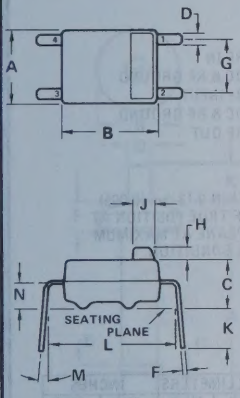
STYLE 1:
TERM. 1. CATHODE
2. ANODE

STYLE 2:
TERM. 1. ANODE
2. CATHODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	16.94	17.45	0.667	0.687
B	–	16.94	–	0.667
C	–	11.43	–	0.450
D	–	9.53	–	0.375
E	2.92	5.08	0.115	0.200
F	–	2.03	–	0.080
H	1.52	–	0.060	–
J	10.72	11.51	0.422	0.453
K	–	25.40	–	1.000
L	3.86	–	0.152	–
P	5.59	6.32	0.220	0.249
Q	3.56	4.45	0.140	0.175

NOTES:
1. Dimension "P" is diameter.
2. All JEDEC dimensions and notes apply.

CASE 259-01



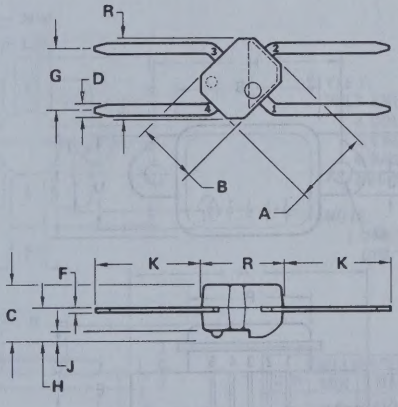
STYLE 1:
PIN 1. SOURCE
2. DRAIN
3. GATE 2
4. GATE 1

STYLE 2:
PIN 1. POS
2. A/C
3. A/C
4. NEG

STYLE 3:
PIN 1. SOURCE
2. GATE 1
3. GATE 2
4. DRAIN

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.21	5.59	0.205	0.220
B	6.60	7.11	0.260	0.280
C	3.43	4.06	0.135	0.160
D	0.63	0.89	0.025	0.035
F	1.50	1.75	0.059	0.069
G	3.94	4.19	0.155	0.165
H	0.64	0.89	0.025	0.035
J	0.20	0.30	0.008	0.012
K	2.54	3.56	0.100	0.140
L	9.02	9.27	0.355	0.365
M	–	10°	–	10°
N	1.14	1.40	0.045	0.055

CASE 262-02



STYLE 1:
PIN 1. SOURCE
2. DRAIN
3. GATE 2
4. GATE 1

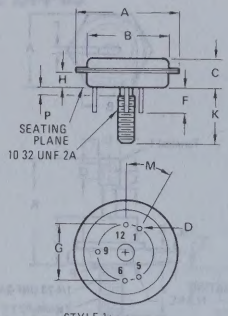
STYLE 2:
PIN 1. COLLECTOR
2. BASE
3. EMITTER
4. BASE

NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RAD OF TRUE POSITION AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.95	5.21	0.195	0.205
B	3.94	4.19	0.155	0.165
C	2.67	2.92	0.105	0.115
D	0.64	0.89	0.025	0.035
F	0.20	0.30	0.008	0.012
G	4.06 BSC		0.160 BSC	
H	1.57	1.83	0.062	0.072
J	0.51	0.76	0.020	0.030
K	6.35	7.62	0.250	0.300
R	5.21	5.46	0.205	0.215

9

CASE 264-01

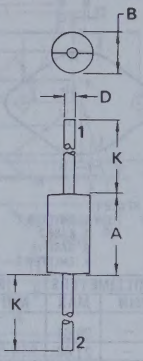


STYLE 1:
PIN 1. GROUND
5. GROUND
6. RF OUT
9. B+
12. RF IN
STUD GROUND

NOTES:
1. DIM "M" ALSO APPLIES BETWEEN LEADS 5 & 6.
2. PINS 1,5,6,9, & 12 TO BE WITHIN 0.51 (0.020) DIA OF TRUE POSITION WITH RESPECT TO STUD (MAJOR DIA)

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	29.21	31.75	1.150	1.250
B	24.64	25.65	0.970	1.010
C	8.26	8.76	0.325	0.345
D	0.71	0.81	0.028	0.032
F	4.06	5.08	0.160	0.200
G	19.05 BSC		0.750 BSC	
H	4.32	4.83	0.170	0.190
K	10.92	11.94	0.430	0.470
M	30° BSC		30° BSC	
P	–	2.79	–	0.110

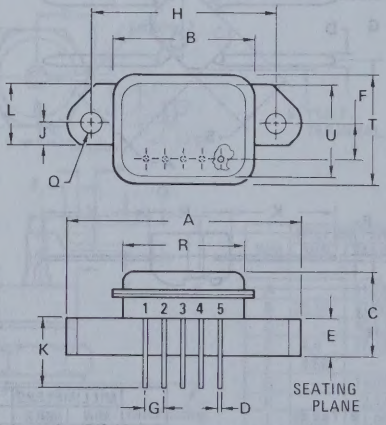
CASE 267-01



STYLE 1:
PIN 1. CATHODE
2. ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.40	9.65	0.370	0.380
B	4.83	5.33	0.190	0.210
D	1.22	1.32	0.048	0.052
K	26.97	27.23	1.062	1.072

CASE 270-02

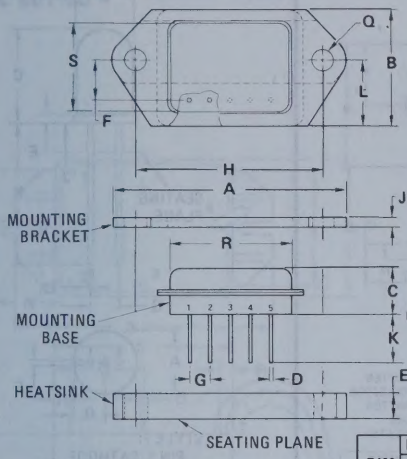


STYLE 1:
PIN 1. RF IN
2. DC & RF GROUND
3. B+ INPUT
4. DC & RF GROUND
5. RF OUT

NOTE:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	46.99	48.01	1.850	1.890
B	29.46	30.48	1.160	1.200
C	14.35	15.11	0.565	0.595
D	0.69	0.84	0.027	0.033
E	4.95	5.46	0.195	0.215
F	7.62	8.26	0.300	0.325
G	4.06 BSC		0.160 BSC	
H	37.97	38.23	1.495	1.505
J	4.57	4.83	0.180	0.190
K	9.14	10.67	0.360	0.420
L	12.32	13.08	0.485	0.515
Q	3.99	4.24	0.157	0.167
R	24.94	25.20	0.982	0.992
T	23.11	24.13	0.910	0.950
U	18.47	18.72	0.727	0.737

CASE 270A-01

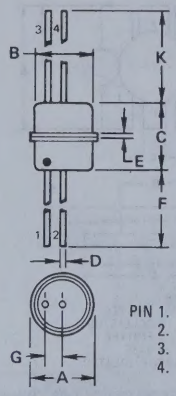


STYLE 1:
PIN 1. RF IN
2. DC & RF GROUND
3. B+ INPUT
4. DC & RF GROUND
5. RF OUT

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	47.12	48.13	1.855	1.895
B	23.75	24.51	0.935	0.965
C	9.40	9.65	0.370	0.380
D	0.69	0.84	0.027	0.033
E	4.83	5.33	0.190	0.210
F	8.00 REF		0.315 REF	
G	4.06 BSC		0.160 BSC	
H	38.10 BSC		1.500 BSC	
J	1.85	2.49	0.073	0.098
K	9.14	10.67	0.360	0.420
L	12.95	13.97	0.510	0.550
Q	3.99	4.75	0.157	0.187
R	24.94	25.20	0.982	0.992
S	18.41	18.67	0.725	0.735

NOTES:
1. LEADS WITHIN 0.25 mm (0.010) RAD OF TRUE POSITION AT GAUGING PLANE AT MAXIMUM MATERIAL CONDITION.
2. OVERALL ASSEMBLED DIMENSION OF 3 SEPARATE PARTS (HEATSINK, MOUNTING BASE AND MOUNTING BRACKET) FROM SEATING PLANE TO TOP OF PACKAGE 14.22/15.11 mm (0.560/0.595) REF.
3. RECOMMENDED TORQUE 6.78×10^{-1} N-m (6 LBS/IN) FOR A # 6 SCREW.

CASE 271-02

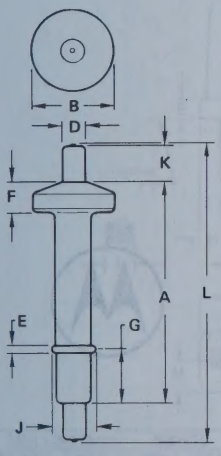


PIN 1. ANODE
2. CATHODE
3. COLLECTOR
4. EMITTER

NOTES:
1. LEADS WITHIN 0.13 (0.005") RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.
2. POLARITY DOT ON PACKAGE DENOTES PIN 1.

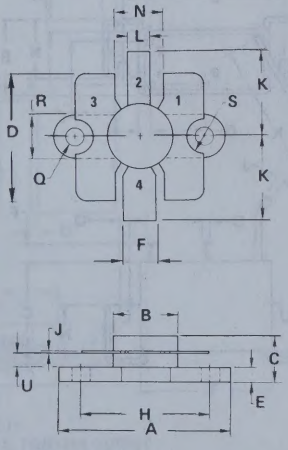
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.70	4.95	0.185	0.195
B	4.06	4.32	0.160	0.170
C	4.95	5.21	0.195	0.205
D	0.38	0.51	0.015	0.020
E	0.36	0.46	0.014	0.018
F	26.67	30.48	1.050	1.200
G	1.27 BSC		0.050 BSC	
K	20.32	24.13	0.800	0.950

CASE 277-01



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	71.37	72.39	2.810	2.850
B	29.46	30.48	1.160	1.200
D	9.02	9.27	0.355	0.365
E	3.02	3.28	0.119	0.129
F	9.65	10.67	0.380	0.420
G	18.54	19.56	0.730	0.770
J	14.86	15.62	0.585	0.615
K	11.94	13.97	0.470	0.550
L	–	101.60	–	4.000

CASE 278-02



STYLE 1:
PIN 1. EMITTER
2. COLLECTOR
3. EMITTER
4. BASE
FLANGE-ISOLATED

NOTE:
1. DIM "Q" IS DIA
DIM "S" IS RAD

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	24.51	25.15	0.965	0.990
B	9.47	9.73	0.373	0.383
C	5.97	7.62	0.235	0.300
D	18.29	19.30	0.720	0.760
E	2.16	2.67	0.085	0.105
F	4.32	4.57	0.170	0.180
H	18.29	18.54	0.720	0.730
J	0.10	0.15	0.004	0.006
K	12.19	12.70	0.480	0.500
L	3.05	3.30	0.120	0.130
N	6.86	7.11	0.270	0.280
Q	2.79	3.18	0.110	0.125
R	6.10	6.60	0.240	0.260
S	2.67	3.05	0.105	0.120
U	1.65	1.91	0.065	0.075

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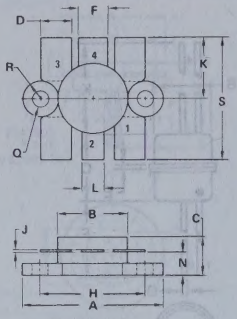
CASE 278-03

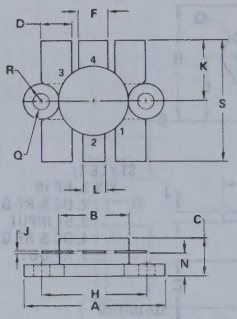


STYLE 1:
PIN 1. EMITTER
2. COLLECTOR
3. EMITTER
4. BASE
FLANGE-ISOLATED

NOTE:
1. DIM "K" FROM CENTER OF "Q".

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	24.38	25.15	0.960	0.990
B	12.45	12.95	0.490	0.510
C	5.97	7.62	0.235	0.300
D	5.46 TYP		0.215 TYP	
F	5.08	5.33	0.200	0.210
H	18.29	18.54	0.720	0.730
J	0.10	0.15	0.004	0.006
K	10.67	10.92	0.420	0.430
L	3.81	4.06	0.150	0.160
N	3.81	4.32	0.150	0.170
Q	2.92	3.18	0.115	0.125
R	3.05	3.30	0.120	0.130
S	21.34	21.84	0.840	0.860

CASE 278-04

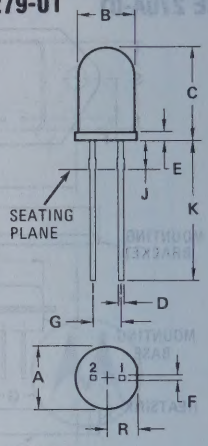


NOTE:
1. DIM. "K" FROM CENTER OF "Q".

STYLE 1:
PIN 1. EMITTER
2. COLLECTOR
3. EMITTER
4. BASE
FLANGE – ISOLATED

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	24.38	25.15	0.960	0.990
B	12.45	12.95	0.490	0.510
C	5.97	7.62	0.235	0.300
D	5.33	5.59	0.210	0.220
F	5.59	5.84	0.220	0.230
H	18.24	18.59	0.718	0.732
J	0.10	0.15	0.004	0.006
K	10.67	10.92	0.420	0.430
L	4.45	4.70	0.175	0.185
N	4.06	4.45	0.160	0.175
Q	2.92	3.18	0.115	0.125
R	3.05	3.30	0.120	0.130
S	21.34	21.84	0.840	0.860

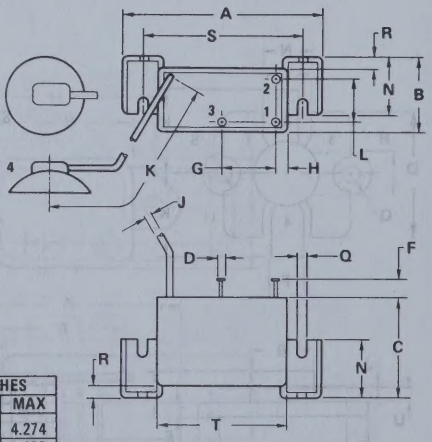
CASE 279-01



STYLE 1:
PIN 1. CATHODE
2. ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.72	5.97	0.225	0.235
B	4.95	5.21	0.195	0.205
C	8.38	8.89	0.330	0.350
D	0.41	0.51	0.016	0.020
E	0.64	0.89	0.025	0.035
F	0.30	0.46	0.012	0.018
G	2.44	2.64	0.096	0.104
J	2.44	2.54	0.096	0.100
K	12.57	13.21	0.495	0.520
R	2.54	2.79	0.100	0.110

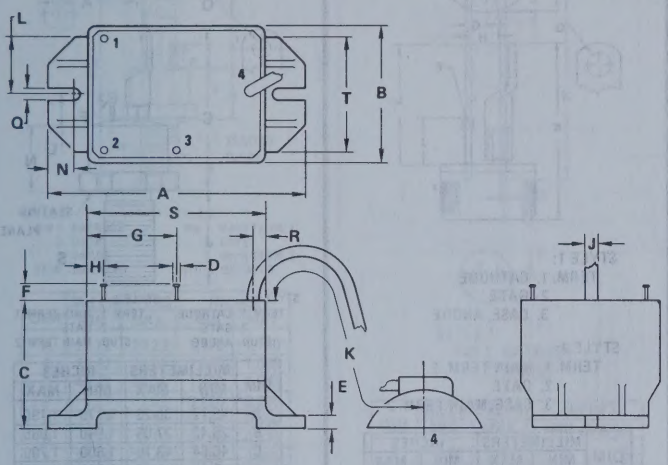
CASE 280-03



STYLE 1:
TERM. 1. INPUT
2. GROUND
3. FOCUS
4. OUTPUT

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	107.29	108.56	4.224	4.274
B	41.02	41.53	1.615	1.635
C	53.72	54.23	2.115	2.135
D	3.68	3.94	0.145	0.155
F	9.40	9.65	0.370	0.380
G	31.12	31.27	1.225	1.235
H	3.68	3.94	0.145	0.155
J	3.81	5.08	0.150	0.200
K	508.00	558.80	20.000	22.000
L	27.31	27.56	1.075	1.085
N	31.50	32.00	1.240	1.260
Q	4.70	4.95	0.185	0.195
R	6.10	6.60	0.240	0.260
S	85.60	85.85	3.370	3.380
T	69.85	70.10	2.750	2.760

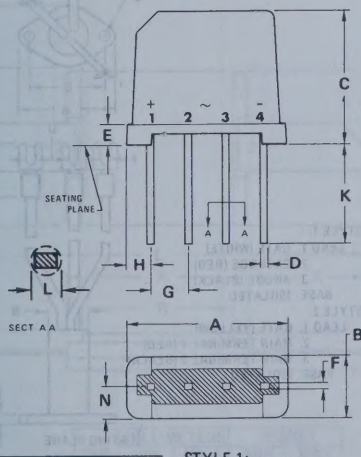
CASE 281-03



STYLE 1:
TERM. 1. INPUT
2. GROUND
3. FOCUS
4. OUTPUT

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	98.68	100.20	3.885	3.945
B	53.09	53.59	2.090	2.110
C	49.28	49.78	1.940	1.960
D	3.56	3.94	0.140	0.155
E	4.50	5.00	0.177	0.197
F	5.08	9.62	0.200	0.380
G	34.04	34.54	1.340	1.360
H	6.10	6.60	0.240	0.260
J	3.81	5.08	0.150	0.200
K	508.00	558.80	20.000	22.000
L	21.84	22.35	0.860	0.880
N	7.37	7.87	0.290	0.310
Q	4.70	4.95	0.185	0.195
R	4.83	5.33	0.190	0.210
S	68.71	69.22	2.705	2.725
T	43.94	44.45	1.730	1.750

CASE 282-02

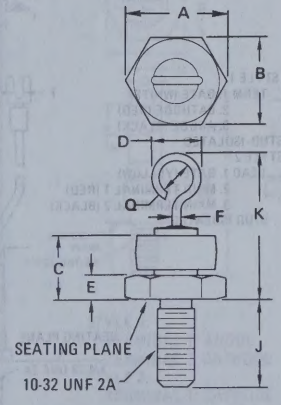


DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	16.00	17.53	0.630	0.690
B	5.59	7.11	0.220	0.280
C	13.59	13.97	0.535	0.550
D	0.69	0.94	0.027	0.037
E	1.91	2.16	0.075	0.085
F	0.56	0.71	0.022	0.028
G	3.81 BSC		0.150 BSC	
H	2.29	3.05	0.090	0.120
K	7.62	12.70	0.300	0.500
L	0.89	1.14	0.035	0.045
N	2.79	3.56	0.110	0.140

STYLE 1:
PIN 1. POSITIVE OUTPUT
2. A/C INPUT
3. A/C INPUT
4. NEGATIVE OUTPUT

NOTES:
1. LEADS WITHIN 0.25 mm (0.010) OF TRUE POSITION AT SEATING PLANE, AT MAXIMUM MATERIAL CONDITION.
2. "H" TO BE MEASURED 1.27 mm (0.050) BELOW SEATING PLANE.

CASE 283-01



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	12.12	12.70	0.477	0.500
B	10.77	11.10	0.424	0.437
C	–	10.29	–	0.405
D	–	6.35	–	0.250
E	1.91	4.45	0.075	0.175
F	1.19	1.35	0.047	0.053
J	10.72	11.51	0.422	0.453
K	–	20.32	–	0.800
Q	1.52	–	0.060	–

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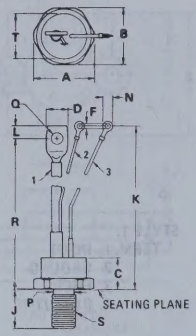
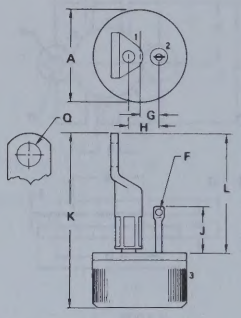
CASE 285-01



STYLE 1:
TERM. 1. CATHODE
2. CATHODE
3. GATE
STUD. ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	29.72	30.23	1.170	1.190
B	26.42	27.05	1.040	1.065
C	17.14	20.95	0.675	0.825
D	12.70	15.24	0.500	0.600
F	3.56	3.81	0.140	0.150
J	21.84	22.35	0.860	0.880
K	173.99	190.50	6.850	7.500
L	7.11	8.13	0.280	0.320
N	5.46	7.62	0.215	0.300
P	10.79	12.67	0.425	0.499
Q	6.60	7.87	0.260	0.310
R	146.68	159.13	5.775	6.265
S	1/2 – 20 UNF – 2A			
T	26.27	25.78	0.995	1.015

CASE 287-01

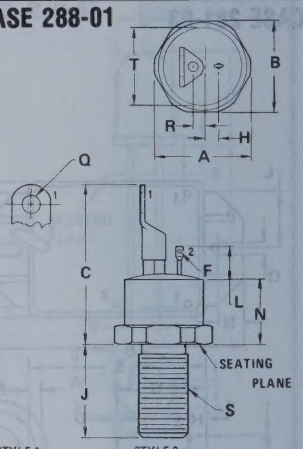


STYLE 1:
TERM. 1. CATHODE
2. GATE
3. CASE, ANODE

STYLE 2:
TERM. 1. MAIN TERM. 1
2. GATE
3. CASE, MAIN TERM. 2

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	19.05	19.30	0.750	0.760
F	1.27	1.65	0.050	0.065
G	3.68	3.94	0.145	0.155
H	5.97	6.22	0.235	0.245
J	9.27	9.53	0.365	0.375
K	36.20	37.47	1.425	1.475
L	25.40	26.67	1.000	1.050
Q	4.83	5.21	0.190	0.205

CASE 288-01

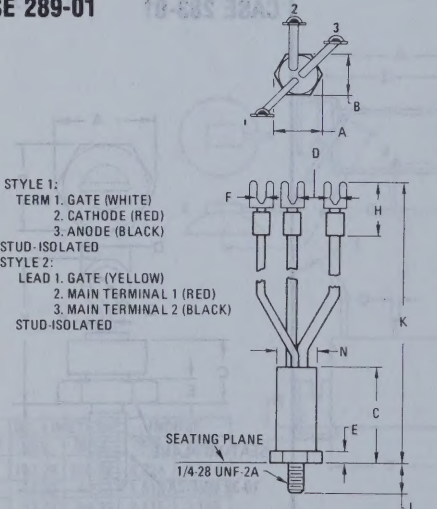


STYLE 1:
TERM. 1. CATHODE
2. GATE
STUD. ANODE

STYLE 2:
TERM. 1. MAIN TERM. 1
2. GATE
STUD. MAIN TERM. 2

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	29.72	30.23	1.170	1.190
B	26.42	27.05	1.040	1.065
C	40.64	43.18	1.600	1.700
F	1.27	1.65	0.050	0.065
H	3.68	3.94	0.145	0.155
J	21.59	22.48	0.850	0.885
L	5.08	9.52	0.200	0.375
N	17.14	20.95	0.675	0.825
Q	4.83	5.21	0.190	0.205
R	2.16	2.41	0.085	0.095
S	1/2 – 20 UNF – 2A			
T	25.27	25.78	0.995	1.015

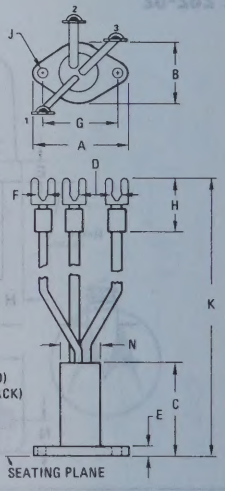
CASE 289-01



STYLE 1:
TERM 1. GATE (WHITE)
2. CATHODE (RED)
3. ANODE (BLACK)
STUD-ISOLATED
STYLE 2:
LEAD 1. GATE (YELLOW)
2. MAIN TERMINAL 1 (RED)
3. MAIN TERMINAL 2 (BLACK)
STUD-ISOLATED

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	19.43	19.56	0.765	0.770
B	17.20	17.35	0.677	0.683
C	35.31	36.07	1.390	1.420
D	4.62	5.03	0.182	0.198
E	4.95	5.21	0.195	0.205
F	3.96	4.37	0.156	0.172
H	21.34	23.01	0.840	0.906
J	10.85	11.35	0.427	0.447
K	203.20	228.60	8.000	9.000
N	15.75	16.00	0.620	0.630

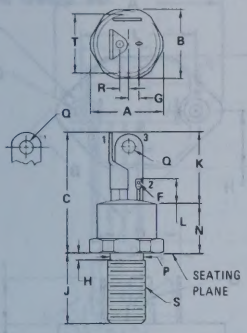
CASE 290-01



STYLE 1:
LEAD 1. GATE (WHITE)
2. CATHODE (RED)
3. ANODE (BLACK)
BASE. ISOLATED
STYLE 2:
LEAD 1. GATE (YELLOW)
2. MAIN TERMINAL 1 (RED)
3. MAIN TERMINAL 2 (BLACK)
BASE. ISOLATED

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	38.53	39.37	1.517	1.550
B	24.64	24.89	0.970	0.980
C	33.65	34.29	1.325	1.350
D	4.62	5.03	0.182	0.198
E	3.05	3.30	0.120	0.130
F	3.96	4.37	0.156	0.172
G	30.15 BSC		1.187 BSC	
H	21.34	23.06	0.840	0.908
J	3.96	4.04	0.156	0.159
K	203.20	228.60	8.000	9.000
N	15.75	16.00	0.620	0.630

CASE 291-01

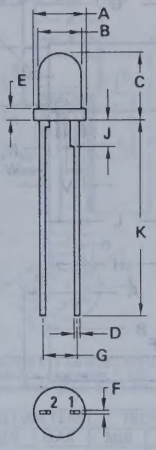


STYLE 1:
PIN 1. CATHODE
2. GATE
3. ANODE
STUD. ISOLATED

STYLE 2:
PIN 1. MAIN TERM. 1
2. GATE
3. MAIN TERM. 2
STUD. ISOLATED

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	29.72	30.23	1.170	1.190
B	26.42	27.05	1.040	1.065
C	45.72	48.26	1.800	1.900
F	1.27	1.65	0.050	0.065
G	3.68	3.94	0.145	0.155
H	2.29	2.79	0.090	0.110
J	21.59	22.48	0.850	0.885
K	22.86	27.94	0.900	1.100
L	5.08	9.53	0.200	0.375
N	22.10	23.11	0.870	0.910
P	11.43	11.94	0.450	0.470
Q	4.83	5.21	0.190	0.205
R	2.16	2.41	0.085	0.095
S	1/2 – 20 UNF – 2A			
T	25.27	25.78	0.995	1.015

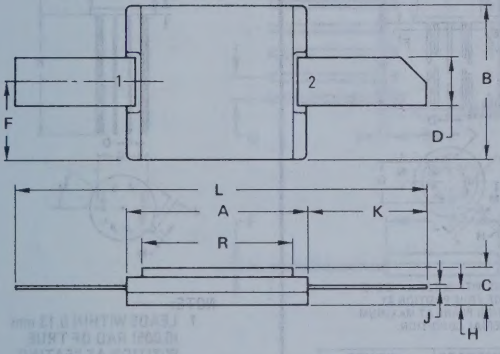
CASE 292-01



STYLE 1:
PIN 1. CATHODE
2. ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	3.68	3.94	0.145	0.155
B	2.92	3.18	0.115	0.125
C	4.95	5.21	0.195	0.205
D	0.38	0.48	0.015	0.019
E	0.76	1.02	0.030	0.040
F	0.20	0.30	0.008	0.012
G	2.41	2.67	0.095	0.105
J	1.78	2.03	0.070	0.080
K	12.70	–	0.500	–

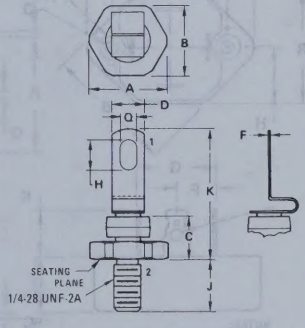
CASE 293-01



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.40	10.16	0.370	0.400
B	8.00	8.76	0.315	0.345
C	–	2.41	–	0.095
D	2.29	2.79	0.090	0.110
F	4.06	4.32	0.160	0.170
H	0.89	1.27	0.035	0.050
J	0.10	0.15	0.004	0.006
K	5.08	–	0.200	–
L	19.56	–	0.770	–
R	7.87	8.38	0.310	0.330

STYLE 1:
PIN 1. BASE
2. COLLECTOR

CASE 296-03



STYLE 1:
TERMINAL 1: ANODE
TERMINAL 2. CATHODE
STYLE 2:
TERMINAL 1: CATHODE
TERMINAL 2: ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	18.29	–	0.720	–
B	16.99	17.48	0.669	0.688
C	–	10.67	–	0.420
D	–	8.38	–	0.330
F	0.46	0.56	0.018	0.022
H	7.62	8.13	0.300	0.320
J	10.72	11.51	0.422	0.453
K	–	30.48	–	1.200
Q	4.44	4.70	0.175	0.185

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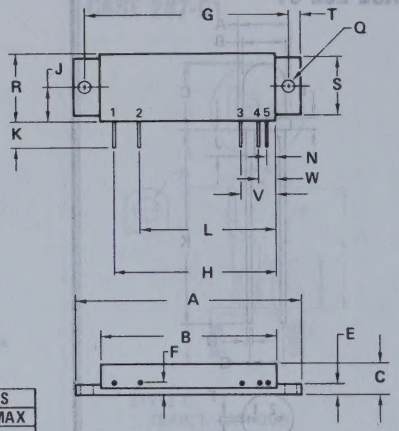
CASE 297-01

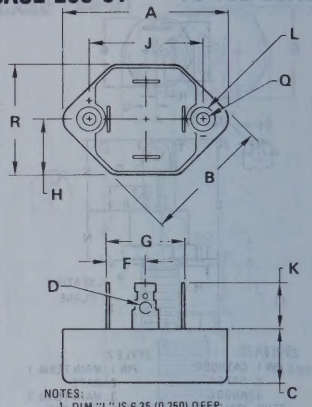


DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	67.06	67.56	2.640	2.660
B	52.32	52.83	2.060	2.080
C	8.51	8.89	0.335	0.350
E	2.54	2.79	0.100	0.110
F	2.67	2.92	0.105	0.115
G	61.09 BSC		2.405 BSC	
H	47.88	48.64	1.885	1.915
J	10.67	11.18	0.420	0.440
K	5.84	7.62	0.230	0.300
L	40.26	41.02	1.585	1.615
N	2.16	2.92	0.085	0.115
Q	3.45	3.71	0.136	0.146
R	20.32	20.57	0.800	0.810
S	17.02	17.53	0.670	0.690
T	2.98	3.24	0.1175	0.1275
V	9.78	10.54	0.385	0.415
W	4.70	5.46	0.185	0.215

STYLE 1:
PIN 1. RF OUTPUT
2. D.C. TERM.
3. D.C. GAIN
4. GROUND
5. RF INPUT

NOTE:
1. MOUNTING HOLES WITHIN .13 (.005) DIA. OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.

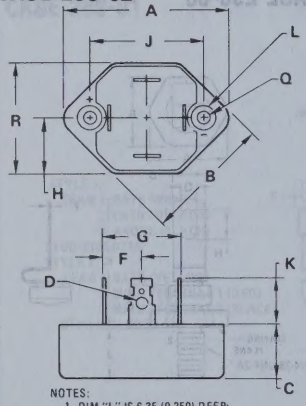
CASE 298-01



NOTES:
1. DIM "L" IS 6.35 (0.250) DEEP; DIM "Q" IS THRU HOLE.
2. MOUNTING HOLES WITHIN 0.25 mm (0.010) DIA OF TRUE POSITION AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	47.75	48.89	1.880	1.925
B	36.20	37.21	1.425	1.465
C	15.37	16.38	0.605	0.645
D	3.43	3.78	0.135	0.149
F	10.92	11.94	0.430	0.470
G	22.35	23.37	0.880	0.920
H	15.95	16.46	0.628	0.648
J	33.32 BSC		1.312 BSC	
K	12.88	13.89	0.507	0.547
L	7.24	7.49	0.285	0.295
Q	3.94	4.19	0.155	0.165
R	31.90	32.92	1.256	1.296

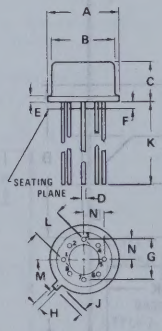
CASE 298-02



NOTES:
1. DIM "L" IS 6.35 (0.250) DEEP; DIM "Q" IS THRU HOLE.
2. MOUNTING HOLES WITHIN 0.25 mm (0.010) DIA OF TRUE POSITION AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	56.59	57.66	2.228	2.270
B	43.82	44.83	1.725	1.765
C	21.59	22.61	0.850	0.890
D	3.43	3.78	0.135	0.149
F	16.00	17.02	0.630	0.670
G	32.51	33.53	1.280	1.320
H	21.91	22.41	0.8625	0.8825
J	43.94 BSC		1.730 BSC	
K	12.88	13.89	0.507	0.547
L	7.24	7.49	0.285	0.295
Q	3.94	4.19	0.155	0.165
R	43.82	44.83	1.725	1.765

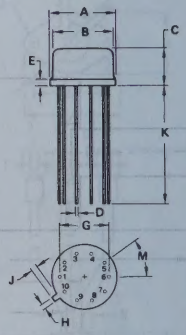
CASE 601-04



NOTE:
1. LEADS WITHIN 0.25 mm (0.010) DIA OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.51	9.40	0.335	0.370
B	7.75	8.51	0.305	0.335
C	4.19	4.70	0.165	0.185
D	0.41	0.48	0.016	0.019
E	0.25	1.02	0.010	0.040
F	0.25	1.02	0.010	0.040
G	5.08 BSC		0.200 BSC	
H	0.71	0.86	0.028	0.034
J	0.74	1.14	0.029	0.045
K	12.70	–	0.500	–
L	3.05	4.06	0.120	0.160
M	45° BSC		45° BSC	
N	2.41	2.67	0.095	0.105

CASE 602A-03



NOTE:
1. LEADS WITHIN 0.13 mm (0.005) RAD OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.51	9.39	0.335	0.370
B	7.75	8.50	0.305	0.335
C	–	4.57	–	0.180
D	0.41	0.48	0.016	0.019
E	–	1.02	–	0.040
G	5.84 BSC		0.230 BSC	
H	0.71	0.86	0.028	0.034
J	0.74	1.14	0.029	0.045
K	12.70	–	0.500	–
M	36° BSC		36° BSC	

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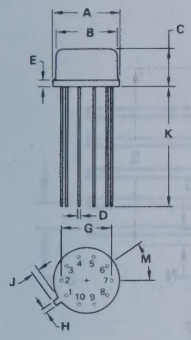
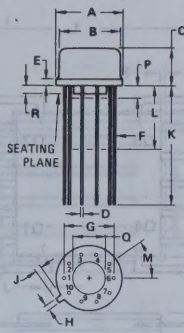
CASE 602B-03



NOTE:
1. LEADS WITHIN 0.13 mm (0.005) RAD OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.51	9.40	0.335	0.370
B	7.75	8.50	0.305	0.335
C	–	4.57	–	0.180
D	0.41	0.48	0.016	0.019
E	–	1.02	–	0.040
G	5.84 BSC		0.230 BSC	
H	0.71	0.86	0.028	0.034
J	0.74	1.14	0.029	0.045
K	19.05	–	0.750	–
M	36° BSC		36° BSC	

CASE 603-04 TO-100

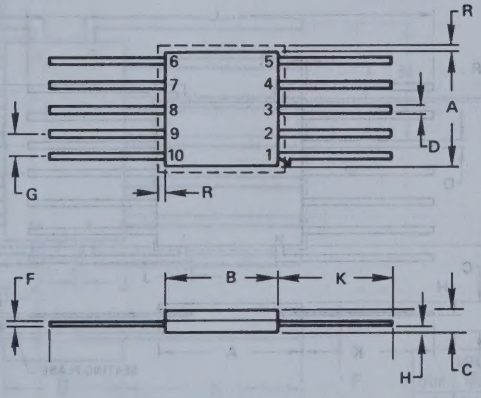


NOTE:
LEADS WITHIN 0.18 mm (0.007) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.51	9.39	0.335	0.370
B	7.75	8.51	0.305	0.335
C	4.19	4.70	0.165	0.185
D	0.407	0.533	0.016	0.021
E	–	1.02	–	0.040
F	0.406	0.483	0.016	0.019
G	5.84 BSC		0.230 BSC	
H	0.712	0.864	0.028	0.034
J	0.737	1.14	0.029	0.045
K	12.70	–	0.500	–
L	6.35	12.70	0.250	0.500
M	36° BSC		36° BSC	
P	–	1.27	–	0.050
Q	3.05	4.06	0.120	0.160
R	0.254	1.02	0.010	0.040

All JEDEC dimensions and notes apply

CASE 606-04 TO-91



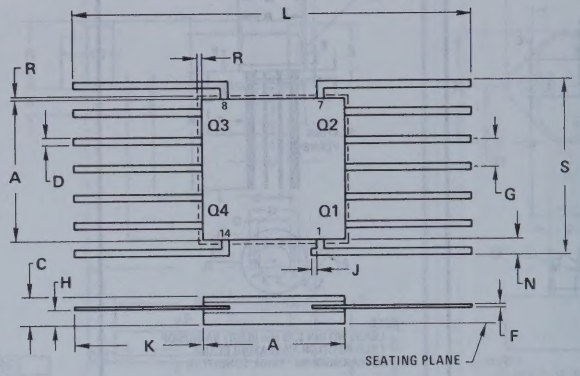
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.10	7.36	0.240	0.290
B	6.10	6.60	0.240	0.260
C	0.762	1.77	0.030	0.070
D	0.254	0.482	0.010	0.019
F	0.077	0.152	0.003	0.006
G	1.15	1.39	0.045	0.055
H	0.127	0.889	0.005	0.035
K	1.78	–	0.070	–
R	–	0.381	–	0.015

NOTE:
1. LEADS WITHIN 0.25 mm (0.010) TOTAL OF TRUE POSITION AT MAXIMUM MATERIAL CONDITION (AT BODY)

All JEDEC dimensions and notes apply

9

CASE 607-04



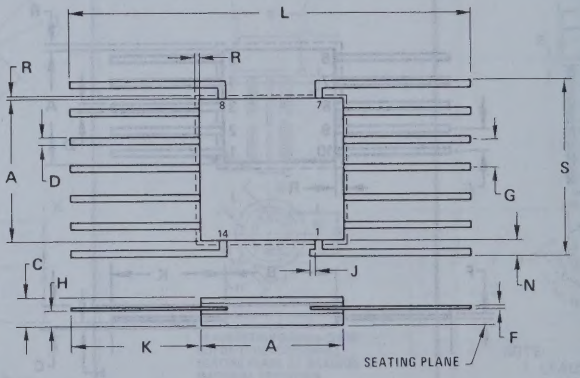
NOTE:
1. LEADS WITHIN 0.13 mm (0.005) TOTAL OF TRUE POSITION RELATIVE TO "A" AT MAXIMUM MATERIAL CONDITION.

STYLE 1:

PIN	
Q1	1. COLLECTOR
	2. BASE
	3. EMITTER
	4. NOT CONNECTED
Q2	5. EMITTER
	6. BASE
	7. COLLECTOR
Q3	8. COLLECTOR
	9. BASE
	10. EMITTER
	11. NOT CONNECTED
Q4	12. EMITTER
	13. BASE
	14. COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.10	6.99	0.240	0.275
C	0.76	2.03	0.030	0.080
D	0.25	0.48	0.010	0.019
F	0.08	0.15	0.003	0.006
G	1.27 BSC		0.050 BSC	
H	0.13	0.89	0.005	0.035
J	–	0.38	–	0.015
K	6.35	–	0.250	–
L	18.80	–	0.740	–
N	0.25	–	0.010	–
R	–	0.38	–	0.015
S	7.62	8.38	0.300	0.330

CASE 607-05



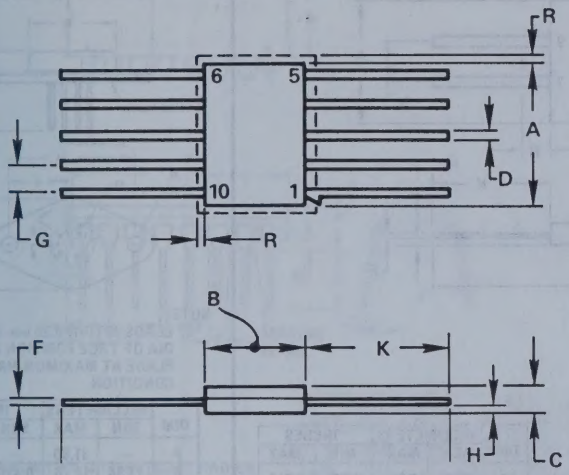
NOTE:
LEADS WITHIN 0.13 mm(0.005) TOTAL OF TRUE POSITION RELATED TO "A" AT MAXIMUM MATERIAL CONDITION.

STYLE 1:

PIN	1. COLLECTOR
	2. BASE
	3. EMITTER
	4. NOT CONNECTED
	5. EMITTER
	6. BASE
	7. COLLECTOR
	8. COLLECTOR
	9. BASE
	10. EMITTER
	11. NOT CONNECTED
	12. EMITTER
	13. BASE
	14. COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.10	6.60	0.240	0.260
C	0.76	1.78	0.030	0.070
D	0.33	0.48	0.013	0.019
F	0.08	0.15	0.003	0.006
G	1.27 BSC		0.050 BSC	
H	0.30	0.89	0.012	0.035
J	–	0.38	–	0.015
K	6.35	9.40	0.250	0.370
L	18.80	–	0.740	–
N	0.25	–	0.010	–
R	–	0.38	–	0.015
S	7.62	8.38	0.300	0.330

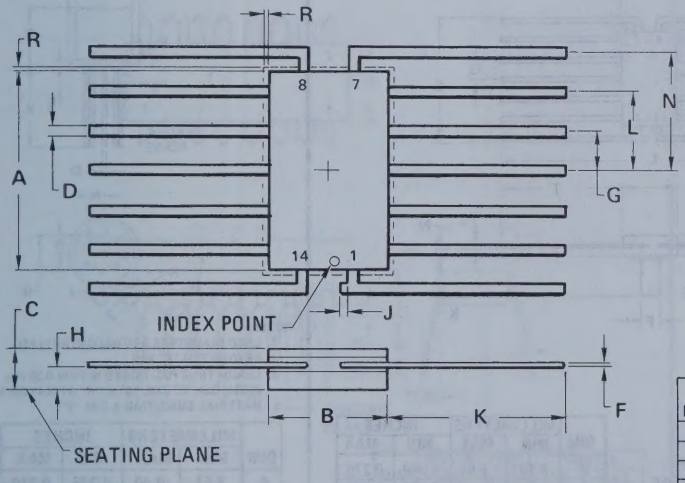
CASE 608-02 TO-90



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.10	7.36	0.240	0.290
B	4.07	4.69	0.160	0.185
C	0.762	1.77	0.030	0.070
D	0.254	0.482	0.010	0.019
F	0.077	0.152	0.003	0.006
G	1.15	1.39	0.045	0.055
H	0.127	0.889	0.005	0.035
K	1.78	–	0.070	–
R	–	0.381	–	0.015

All JEDEC dimensions and notes apply

CASE 609-02 TO-85

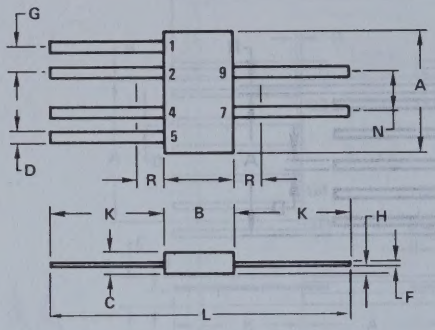


DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.10	6.98	0.240	0.275
B	4.07	4.69	0.160	0.185
C	0.762	1.78	0.030	0.070
D	0.254	0.482	0.010	0.019
F	0.077	0.152	0.003	0.006
G	1.15	1.39	0.045	0.055
H	0.127	0.889	0.005	0.035
J	–	0.381	–	0.015
K	1.78	–	0.070	–
L	2.42	2.66	0.095	0.105
N	3.69	3.93	0.145	0.155
R	–	0.381	–	0.015

Lead 1 identified by color dot or by elbow on lead.

All JEDEC dimensions and notes apply

CASE 610A-03

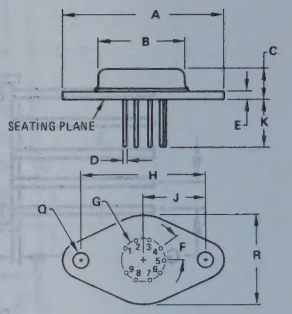


STYLE 1:
PIN 1. BASE
2. EMITTER
4. EMITTER
5. BASE
7. COLLECTOR
9. COLLECTOR

NOTES:
1. DIM "D", "G" & "N" TO BE MEASURED IN ZONE "R".
2. LEADS WITHIN 0.13 mm (0.005) TOTAL OF TRUE POSITION WITHIN "R" AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.10	7.36	0.240	0.290
B	2.92	4.06	0.115	0.160
C	0.76	2.03	0.030	0.080
D	0.36	0.48	0.014	0.019
F	0.08	0.15	0.003	0.006
G	1.27 BSC		0.050 BSC	
H	–	0.89	–	0.035
K	3.81	–	0.150	–
N	2.54 BSC		0.100 BSC	
R	–	1.27	–	0.050

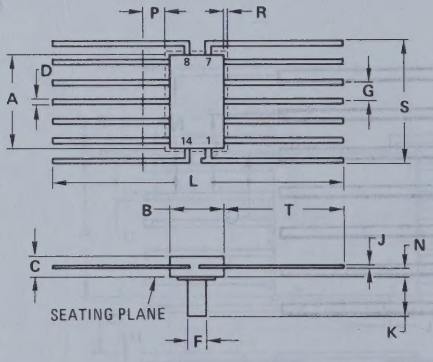
CASE 614-02



NOTE:
1. LEADS WITHIN 0.36 mm (0.014) DIA OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	31.80	–	1.252
B	11.94	12.70	0.470	0.500
C	6.35	8.64	0.250	0.340
D	0.71	0.81	0.028	0.032
E	1.27	1.90	0.050	0.075
F	36° BSC		36° BSC	
G	8.26 BSC		0.325 BSC	
H	24.33	24.43	0.958	0.962
J	12.17	12.22	0.479	0.481
K	9.14	–	0.360	–
Q	3.61	3.86	0.142	0.152
R	–	17.78	–	0.700

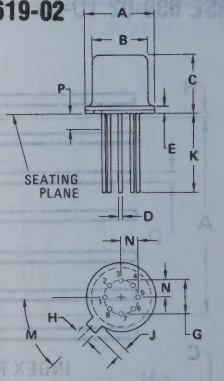
CASE 617-04



NOTES:
1. SOLDERABILITY DEFINED WITHIN "P".
2. LEADS WITHIN 0.25 mm (0.010) TOTAL OF TRUE POSITION (TP) WITH RESPECT TO EACH OTHER AT MAXIMUM MATERIAL CONDITION.
3. LEADS WITHIN 0.64 mm (0.025) TOTAL OF TRUE POSITION (TP) WITH RESPECT TO STUD AT MAXIMUM MATERIAL CONDITION.
4. LEAD 1 TAB IDENTIFICATION OPTIONAL.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.10	6.86	0.240	0.270
B	4.06	5.08	0.160	0.200
C	1.14	1.78	0.045	0.070
D	0.30	0.46	0.012	0.018
F	1.47	1.60	0.058	0.063
G	1.27 BSC		0.050 BSC	
H	0.08	0.15	0.003	0.006
K	2.41	2.79	0.095	0.110
L	16.76	20.32	0.660	0.800
N	0.38	0.76	0.015	0.030
P	1.52 BSC		0.060 BSC	
R	–	0.38	–	0.015
S	7.65	8.31	0.301	0.327
T	6.35	–	0.250	–

CASE 619-02

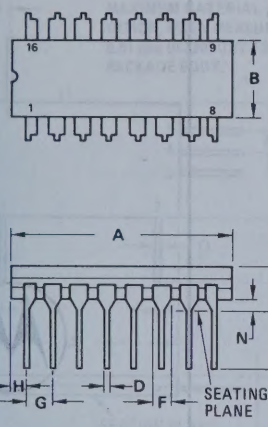


NOTES:
1. LEAD DIAMETERS ARE UNCONTROLLED BEYOND DIM "K" MIN.
2. LEADS, TRUE POSITIONED WITHIN 0.36 mm (0.014) DIA. TO DIM. "A" & "H" AT MAXIMUM MATERIAL CONDITION & DIM. "P".

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.51	9.40	0.335	0.370
B	7.75	8.51	0.305	0.335
C	4.19	4.70	0.165	0.185
D	0.41	0.53	0.016	0.021
E	0.38	1.02	0.015	0.040
G	5.08 BSC		0.200 BSC	
H	0.71	0.86	0.028	0.034
J	0.74	1.14	0.029	0.045
K	12.70	19.05	0.500	0.750
M	45° BSC		45° BSC	
N	2.54 BSC		0.100 BSC	
P	–	1.40	–	0.055

9

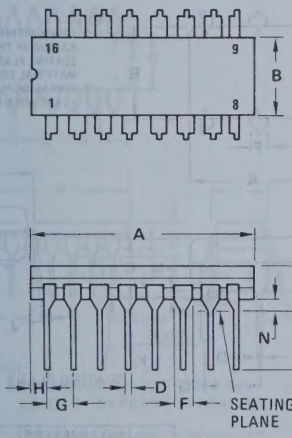
CASE 620-02



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	19.05	19.81	0.750	0.780
B	6.22	6.98	0.245	0.275
C	4.06	5.08	0.160	0.200
D	0.38	0.51	0.015	0.020
F	1.40	1.65	0.055	0.065
G	2.54 BSC		0.100 BSC	
H	0.51	1.14	0.020	0.045
J	0.20	0.30	0.008	0.012
K	3.18	4.06	0.125	0.160
L	7.37	7.87	0.290	0.310
M	–	15^0	–	15^0
N	0.51	1.02	0.020	0.040

NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION
2. PKG. INDEX: NOTCH IN LEAD NOTCH IN CERAMIC OR INK DOT
3. DIM "L" TO CENTER OF LEADS WHEN FORMED PARALLEL

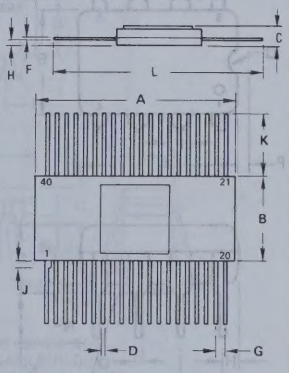
CASE 620-04



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	19.05	19.94	0.750	0.785
B	6.10	7.49	0.240	0.295
C	–	5.08	–	0.200
D	0.38	0.53	0.015	0.021
F	1.40	1.78	0.055	0.070
G	2.54 BSC		0.100 BSC	
H	0.51	1.14	0.020	0.045
J	0.20	0.30	0.008	0.012
K	2.54	–	0.100	–
L	7.49	8.89	0.295	0.350
M	–	15^0	–	15^0
N	0.51	1.02	0.020	0.040

NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.
2. PKG. INDEX: NOTCH IN LEAD NOTCH IN CERAMIC OR INK DOT.
3. DIM "A" AND "B" DO NOT INCLUDE GLASS RUN-OUT.
4. DIM "L" TO INSIDE OF LEADS (MEASURED 0.51 mm (0.020) BELOW BODY)

CASE 621-01

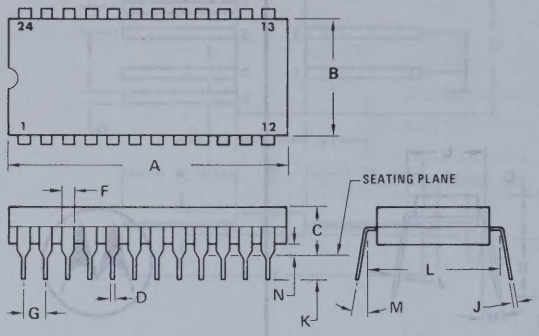


NOTE:
1. LEADS WITHIN 0.25 mm (0.010) TOTAL OF TRUE POSITION AT BODY, AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	25.40	26.41	1.000	1.040
B	10.16	10.67	0.400	0.420
C	1.52	2.54	0.060	0.100
D	0.33	0.43	0.013	0.017
F	0.10	0.15	0.004	0.006
G	1.27 BSC		0.050 BSC	
H	0.51	0.89	0.020	0.035
J	0.25	1.27	0.010	0.050
K	7.49	7.75	0.295	0.305
L	25.15	26.16	0.990	1.030

9

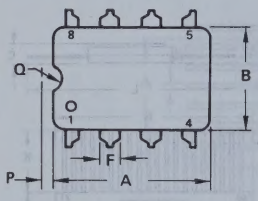
CASE 623-01



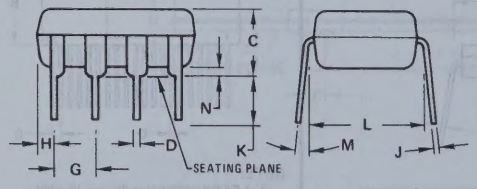
NOTES:
1. DIM "L" TO CENTER OF LEADS WHEN FORMED PARALLEL.
2. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION. (WHEN FORMED PARALLEL)

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	31.24	32.26	1.230	1.270
B	12.70	13.72	0.500	0.540
C	4.06	5.08	0.160	0.200
D	0.41	0.51	0.016	0.020
F	1.27	1.52	0.050	0.060
G	2.54 BSC		0.100 BSC	
J	0.20	0.30	0.008	0.012
K	2.92	3.43	0.115	0.135
L	15.37 BSC		0.605 BSC	
M	5^0	15^0	5^0	15^0
N	0.51	0.76	0.020	0.030

CASE 626-03

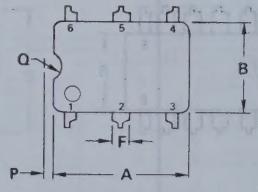


NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.
2. DIM "L" TO CENTER OF LEADS WHEN FORMED PARALLEL.

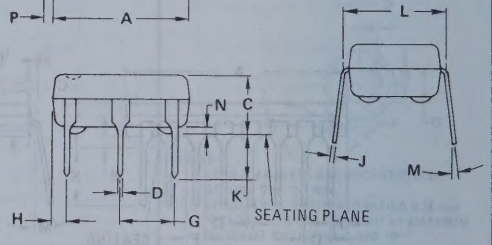


DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.40	10.16	0.370	0.400
B	6.10	6.60	0.240	0.260
C	3.94	4.45	0.155	0.175
D	0.38	0.51	0.015	0.020
F	1.02	1.52	0.040	0.060
G	2.54 BSC		0.100 BSC	
H	0.76	1.27	0.030	0.050
J	0.20	0.30	0.008	0.012
K	2.92	3.43	0.115	0.135
L	7.37	7.87	0.290	0.310
M	–	10^0	–	10^0
N	0.51	0.76	0.020	0.030
P	0.13	0.38	0.005	0.015
Q	0.76	1.02	0.030	0.040

CASE 627-02



NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.
2. DIMENSION "L" TO CENTER OF LEADS WHEN FORMED PARALLEL.

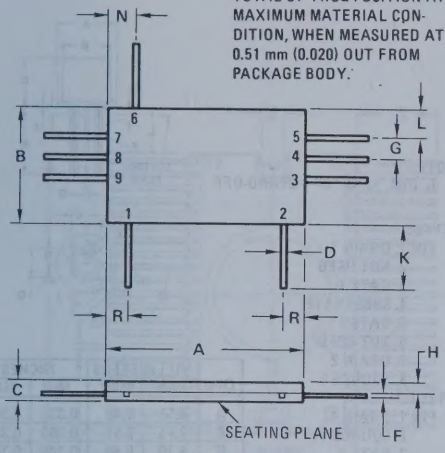


DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.40	10.16	0.370	0.400
B	6.10	6.60	0.240	0.260
C	3.94	4.45	0.155	0.175
D	0.38	0.51	0.015	0.020
F	1.02	1.52	0.040	0.060
G	3.81 BSC		0.150 BSC	
H	0.76	1.27	0.030	0.050
J	0.20	0.30	0.008	0.012
K	2.92	3.43	0.115	0.135
L	7.37	7.87	0.290	0.310
M	–	10^0	–	10^0
N	0.51 NOM		0.020 NOM	
P	0.13	0.38	0.005	0.015
Q	0.76	1.02	0.030	0.040

9

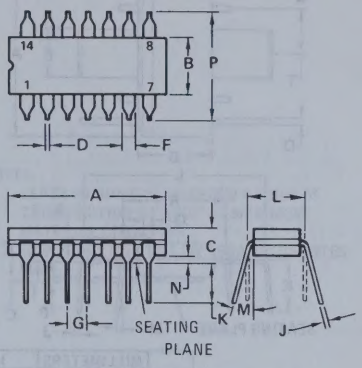
CASE 631-01

NOTE:
1. LEADS WITHIN 0.25 mm (0.010) TOTAL OF TRUE POSITION AT MAXIMUM MATERIAL CONDITION, WHEN MEASURED AT 0.51 mm (0.020) OUT FROM PACKAGE BODY.



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	25.25	25.65	0.990	1.010
B	12.32	13.21	0.485	0.520
C	2.16	2.67	0.085	0.105
D	0.58	0.69	0.023	0.027
F	0.10	0.23	0.004	0.009
G	2.54 BSC		0.100 BSC	
H	1.65	1.91	0.065	0.075
K	8.00	8.51	0.315	0.335
L	3.56	4.06	0.140	0.160
N	3.48	3.73	0.137	0.147
R	2.59	2.84	0.102	0.112

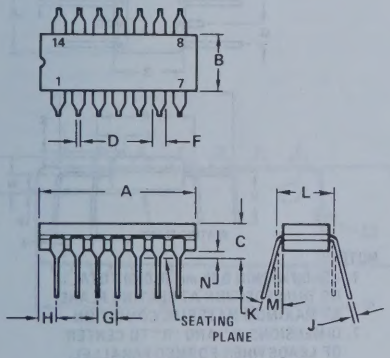
CASE 632-02 TO-116



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	16.8	19.9	0.660	0.785
B	5.59	7.11	0.220	0.280
C	–	5.08	–	0.200
D	0.381	0.584	0.015	0.023
F	0.77	1.77	0.030	0.070
G	2.54 BSC		0.100 BSC	
J	0.203	0.381	0.008	0.015
K	2.54	–	0.100	–
L	7.62 BSC		0.300 BSC	
M	–	15°	–	15°
N	0.51	0.76	0.020	0.030
P	–	8.25	–	0.325

All JEDEC dimensions and notes apply.

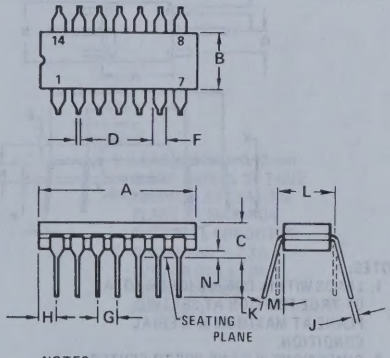
CASE 632-03



NOTE:
1. DIMENSION "L" TO CENTER OF LEADS WHEN FORMED PARALLEL

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	19.05	19.81	0.750	0.780
B	6.22	6.99	0.245	0.275
C	4.32	5.08	0.170	0.200
D	0.41	0.51	0.016	0.020
F	1.45	1.60	0.057	0.063
G	2.54 BSC		0.100 BSC	
H	1.91	2.29	0.075	0.090
J	0.20	0.30	0.008	0.012
K	3.18	4.06	0.125	0.160
L	7.62 BSC		0.300 BSC	
M	–	15°	–	15°
N	0.51	0.76	0.020	0.030

CASE 632-04



NOTES:
1. DIM "A" AND "B" DO NOT INCLUDE GLASS RUN-OUT.
2. DIM "L" TO INSIDE OF LEADS (MEASURED 0.51 mm (0.020) BELOW BODY)

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	19.05	19.94	0.750	0.785
B	6.10	7.49	0.240	0.295
C	–	5.08	–	0.200
D	0.38	0.58	0.015	0.023
F	1.40	1.77	0.055	0.070
G	2.54 BSC		0.100 BSC	
H	1.91	2.29	0.075	0.090
J	0.20	0.38	0.008	0.015
K	2.54	–	0.100	–
L	7.49	8.89	0.295	0.350
M	–	15°	–	15°
N	0.51	1.02	0.020	0.040

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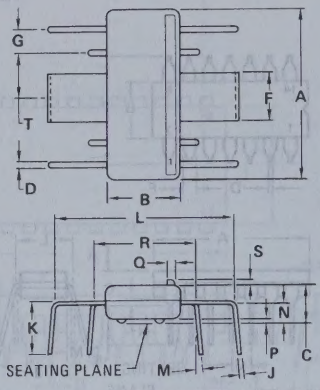
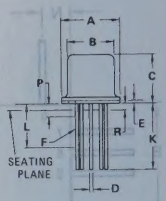
CASE 641A-02



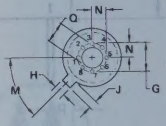
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	18.92	19.18	0.745	0.755
B	7.49	7.75	0.295	0.305
C	4.06	4.57	0.160	0.180
D	0.76	1.27	0.030	0.050
F	5.84	6.35	0.230	0.250
G	2.03 BSC		0.080 BSC	
J	0.33	0.43	0.013	0.017
K	4.45	5.33	0.175	0.210
L	18.80	19.30	0.740	0.760
M	–	10^0	–	10^0
N	2.16	2.67	0.085	0.105
P	0.38	0.64	0.015	0.025
Q	1.52	1.78	0.060	0.070
R	11.68	12.19	0.460	0.480
S	0.64	0.89	0.025	0.035
T	5.08 BSC		0.200 BSC	

NOTES:
1. LEADS WITHIN 0.25 mm (0.010) TOTAL OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.
2. DIMENSIONS "L" AND "R" TO CENTER OF LEADS WHEN FORMED PARALLEL.
3. 0.25 mm (0.010) MAX FLASH PERMITTED AT PARTING LINE (PERIMETER).

CASE 642-02 TO-76



NOTE:
1. DIM "Q" & "R" = STAND-OFF



STYLE 1:
PIN 1. DRAIN 1
2. NOT USED
3. GATE 1
4. SUBSTRATE
5. GATE 2
6. NOT USED
7. DRAIN 2
8. SOURCE 1

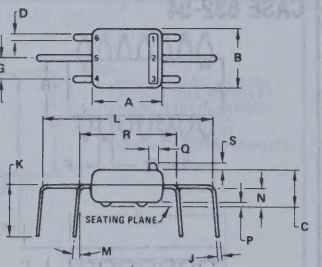
STYLE 2:
PIN 1. DRAIN 1
2. SOURCE 1
3. GATE 1
4. CASE / SUBSTRATE
5. GATE 2
6. SOURCE 2
7. DRAIN 2
8. NO CONNECTION

STYLE 3:
PIN 1. SOURCE 1
2. DRAIN 1
3. GATE 1
4. SUBSTRATE
5. SOURCE 2
6. DRAIN 2
7. GATE 2
8. OPEN

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.51	9.40	0.335	0.370
B	7.75	8.51	0.305	0.335
C	6.10	6.60	0.240	0.260
D	0.406	0.533	0.016	0.021
E	–	1.02	–	0.040
F	0.406	0.483	0.016	0.019
G	5.08 BSC		0.200 BSC	
H	0.711	0.864	0.028	0.034
J	0.737	1.14	0.029	0.045
K	12.70	–	0.500	–
L	6.35	–	0.250	–
M	45^0 BSC		45^0 BSC	
N	2.54 BSC		0.100 BSC	
P	–	1.27	–	0.050
Q	3.05	4.06	0.120	0.160
R	0.254	1.02	0.010	0.040

All JECEC dimensions and notes apply

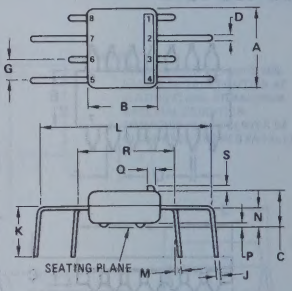
CASE 643A-02



NOTES:
1. LEADS WITHIN 0.25 mm (0.010) TOTAL OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.
2. DIMENSIONS "L" AND "R" TO CENTER OF LEADS WHEN FORMED PARALLEL.
3. 0.25 mm (0.010) MAX FLASH PERMITTED AT PARTING LINE (PERIMETER)

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.60	7.11	0.260	0.280
B	5.33	5.84	0.210	0.230
C	3.43	4.06	0.135	0.160
D	0.64	0.89	0.025	0.035
G	2.03 BSC		0.080 BSC	
J	0.20	0.30	0.008	0.012
K	4.45	5.33	0.175	0.210
L	16.00	16.51	0.630	0.650
M	–	10^0	–	10^0
N	1.65	2.03	0.065	0.080
P	0.51	0.76	0.020	0.030
Q	1.50	1.75	0.059	0.069
R	8.89	9.40	0.350	0.370
S	0.64	0.89	0.025	0.035

CASE 644A-02

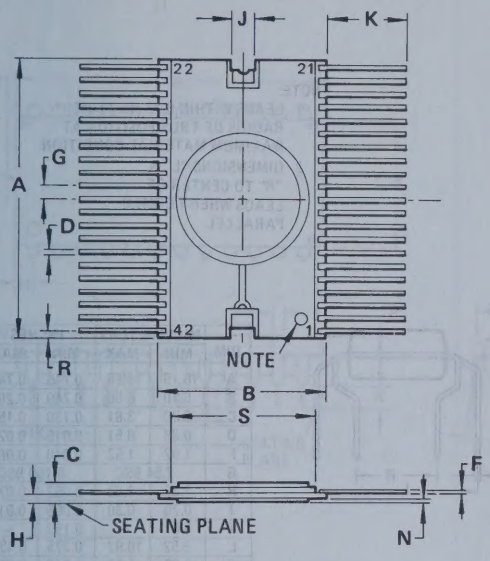


NOTES:
1. LEADS WITHIN 0.25 mm (0.010) TOTAL OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.
2. DIMENSIONS "L" AND "R" TO CENTER OF LEADS WHEN FORMED PARALLEL.
3. 0.25 mm (0.010) MAX FLASH PERMITTED AT PARTING LINE (PERIMETER)

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	7.37	7.87	0.290	0.310
B	6.60	6.86	0.260	0.270
C	3.43	4.06	0.135	0.160
D	0.64	0.89	0.025	0.035
G	2.03 BSC		0.080 BSC	
J	0.20	0.31	0.008	0.012
K	4.45	5.33	0.175	0.210
L	16.00	16.51	0.630	0.650
M	–	10^0	–	10^0
N	1.65	2.03	0.065	0.080
P	0.51	0.76	0.020	0.030
Q	1.50	1.75	0.059	0.069
R	8.89	9.40	0.350	0.370
S	0.64	0.89	0.025	0.035

9

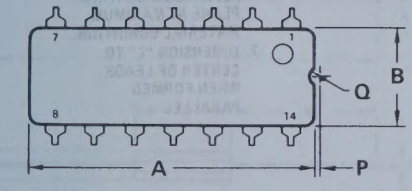
CASE 645-02

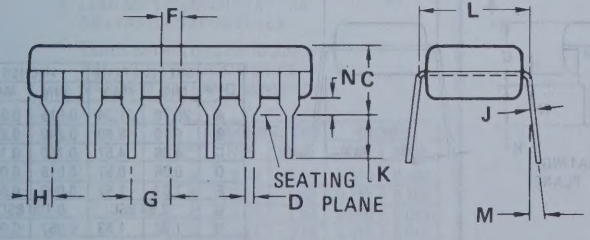


NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT BODY AT MAXIMUM MATERIAL CONDITION.
2. IDENTIFICATION DOT ON CERAMIC DENOTES PIN 1.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	26.52	27.28	1.044	1.074
B	16.00	16.51	0.630	0.650
C	2.03	2.92	0.080	0.115
D	0.46	0.58	0.018	0.023
F	0.20	0.30	0.008	0.012
G	1.27 BSC		0.050 BSC	
H	0.76	1.14	0.030	0.045
J	2.03 REF		0.080 REF	
K	7.37	7.87	0.290	0.310
N	0.25	0.43	0.010	0.017
R	0.56	0.94	0.022	0.037
S	13.97 REF		0.550 REF	

CASE 646-03



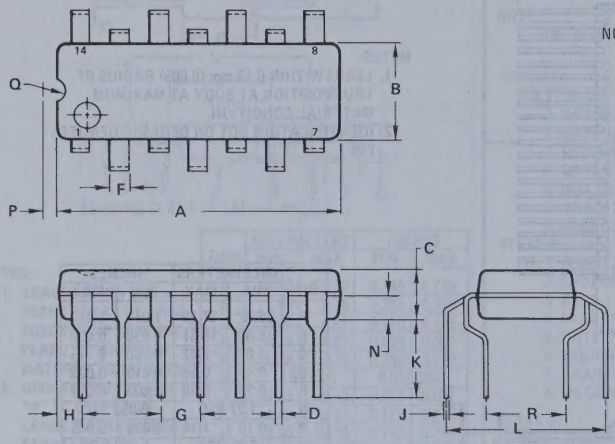


NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.
2. DIMENSION "L" TO CENTER OF LEADS WHEN FORMED PARALLEL

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	18.16	18.80	0.715	0.740
B	6.10	6.60	0.240	0.260
C	4.06	4.57	0.160	0.180
D	0.38	0.51	0.015	0.020
F	1.02	1.52	0.040	0.060
G	2.54 BSC		0.100 BSC	
H	1.32	1.83	0.052	0.072
J	0.20	0.30	0.008	0.012
K	2.92	3.43	0.115	0.135
L	7.37	7.87	0.290	0.310
M	–	10^{0}	–	10^{0}
N	0.51	1.02	0.020	0.040
P	0.13	0.38	0.005	0.015
Q	0.51	0.76	0.020	0.030

9

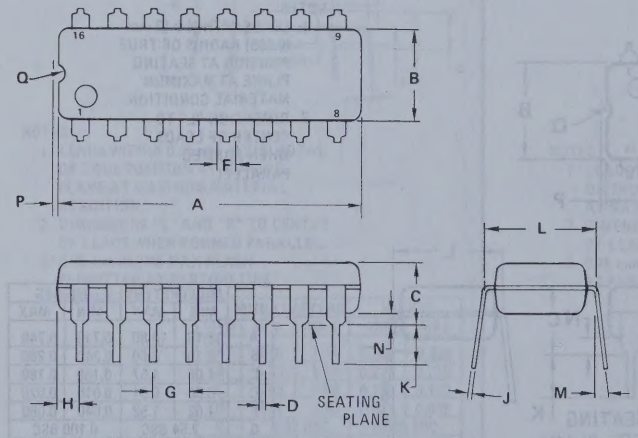
CASE 647-03



NOTE:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT MAXIMUM MATERIAL CONDITION
2. DIMENSIONS "L" & "R" TO CENTER OF LEADS WHEN FORMED PARALLEL

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	18.16	18.80	0.715	0.740
B	6.10	6.60	0.240	0.260
C	3.30	3.81	0.130	0.150
D	0.38	0.51	0.015	0.020
F	1.02	1.52	0.040	0.060
G	2.54 BSC		0.100 BSC	
H	1.32	1.83	0.052	0.072
J	0.20	0.30	0.008	0.012
K	3.81	–	0.150	–
L	9.52	10.92	0.375	0.430
N	1.02	1.52	0.040	0.060
P	0.13	0.38	0.005	0.015
Q	0.51	0.76	0.020	0.030
R	4.70	5.97	0.185	0.235

CASE 648-03

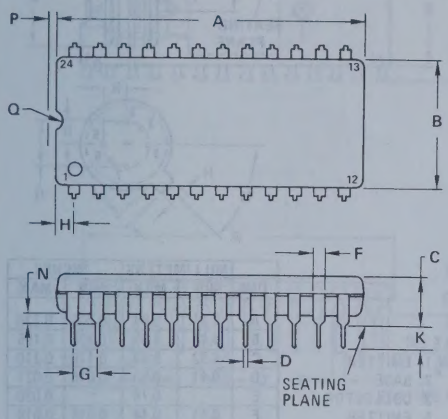


NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.
2. DIMENSION "L" TO CENTER OF LEADS WHEN FORMED PARALLEL

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	20.70	21.34	0.815	0.840
B	6.10	6.60	0.240	0.260
C	4.06	4.57	0.160	0.180
D	0.38	0.51	0.015	0.020
F	1.02	1.52	0.040	0.060
G	2.54 BSC		0.100 BSC	
H	1.32	1.83	0.052	0.072
J	0.20	0.30	0.008	0.012
K	2.92	3.43	0.115	0.135
L	7.37	7.87	0.290	0.310
M	–	10^0	–	10^0
N	0.51	1.02	0.020	0.040
P	0.13	0.38	0.005	0.015
Q	0.51	0.76	0.020	0.030

9

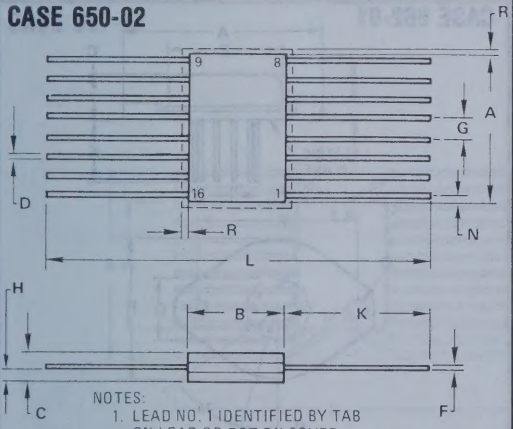
CASE 649-03



NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.
2. DIMENSION "L" TO CENTER OF LEADS WHEN FORMED PARALLEL.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	31.50	32.13	1.240	1.265
B	13.21	13.72	0.520	0.540
C	4.70	5.21	0.185	0.205
D	0.38	0.51	0.015	0.020
F	1.02	1.52	0.040	0.060
G	2.54 BSC		0.100 BSC	
H	1.65	2.16	0.065	0.085
J	0.20	0.30	0.008	0.012
K	2.92	3.43	0.115	0.135
L	14.99	15.49	0.590	0.610
M	–	10^0	–	10^0
N	0.51	1.02	0.020	0.040
P	0.13	0.38	0.005	0.015
Q	0.51	0.76	0.020	0.030

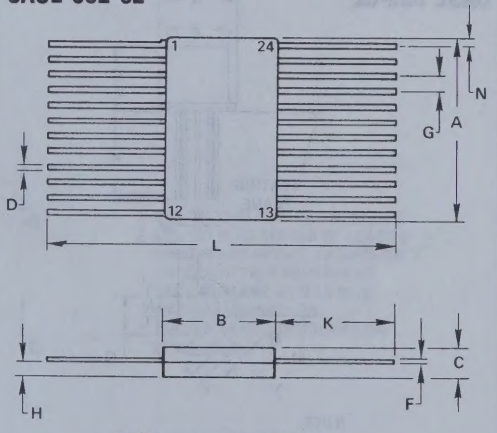
CASE 650-02



NOTES:
1. LEAD NO. 1 IDENTIFIED BY TAB ON LEAD OR DOT ON COVER.
2. LEADS WITHIN 0.13 mm (0.005) TOTAL OF TRUE POSITION AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.40	10.16	0.370	0.400
B	6.22	6.60	0.245	0.260
C	1.52	2.03	0.060	0.080
D	0.38	0.48	0.015	0.019
F	0.08	0.15	0.003	0.006
G	1.27 BSC		0.050 BSC	
H	0.64	0.89	0.025	0.035
K	6.35	9.40	0.250	0.370
L	18.92	–	0.745	–
N	–	0.51	–	0.020
R	–	0.38	–	0.015

CASE 652-02

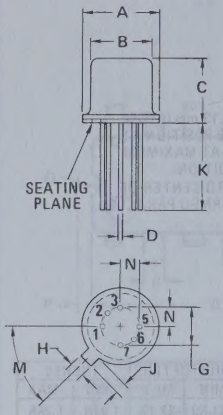


NOTES:
1. LEADS WITHIN 0.25 mm (0.010) TOTAL OF TRUE POSITION AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	14.99	15.49	0.590	0.610
B	9.27	9.91	0.365	0.390
C	1.27	2.03	0.050	0.080
D	0.38	0.48	0.015	0.019
F	0.08	0.15	0.003	0.006
G	1.27 BSC		0.050 BSC	
H	0.69	1.02	0.027	0.040
K	6.35	9.40	0.250	0.370
L	21.97	–	0.865	–
N	0.25	0.63	0.010	0.025

9

CASE 654-07

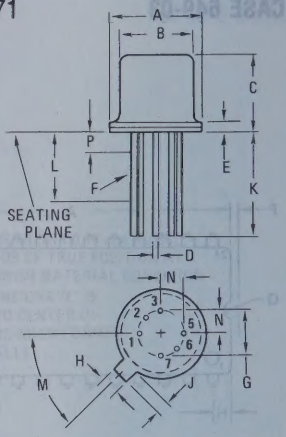


STYLE 1:
PIN 1. COLLECTOR
2. BASE
3. EMITTER
4. OMITTED
5. EMITTER
6. BASE
7. COLLECTOR
8. OMITTED

STYLE 2:
PIN 1. COLLECTOR
2. BASE
3. EMITTER
4. OMITTED
5. SOURCE
6. DRAIN
7. GATE
8. OMITTED

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.51	9.40	0.335	0.370
B	7.75	8.51	0.305	0.335
C	3.81	4.70	0.150	0.185
D	0.41	0.53	0.016	0.021
G	5.08 BSC		0.200 BSC	
H	0.71	0.86	0.028	0.034
J	0.74	1.14	0.029	0.045
K	12.70	–	0.500	–
M	45° BSC		45° BSC	
N	2.54 BSC		0.100 BSC	

CASE 655-01 TO-71

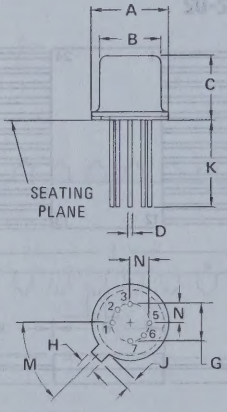


STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR
5. EMITTER
6. BASE
7. COLLECTOR

All JEDEC dimensions and notes apply.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.31	5.84	0.209	0.230
B	4.45	4.95	0.175	0.195
C	4.32	5.33	0.170	0.210
D	0.41	0.53	0.016	0.021
E	–	0.76	–	0.030
F	0.41	0.48	0.016	0.019
G	2.54 BSC		0.100 BSC	
H	0.91	1.17	0.036	0.046
J	0.71	1.22	0.028	0.048
K	12.70	–	0.500	–
L	6.35	–	0.250	–
M	45° BSC		45° BSC	
N	1.27 BSC		0.050 BSC	
P	–	1.27	–	0.050

CASE 655-02

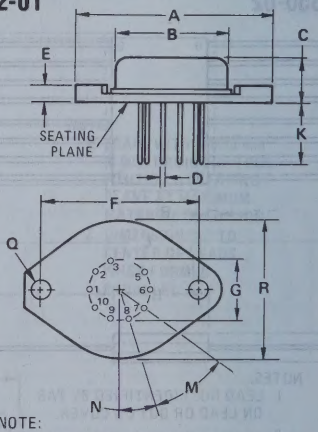


NOTE:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.

STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR
5. EMITTER
6. BASE
7. COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.31	5.84	0.209	0.230
B	4.45	4.95	0.175	0.195
C	4.32	5.33	0.170	0.210
D	0.41	0.48	0.016	0.019
G	2.54 BSC		0.100 BSC	
H	0.91	1.17	0.036	0.046
J	0.71	1.22	0.028	0.048
K	12.70	–	0.500	–
M	45° BSC		45° BSC	
N	1.72 BSC		0.050 BSC	

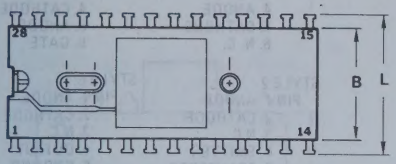
CASE 662-01



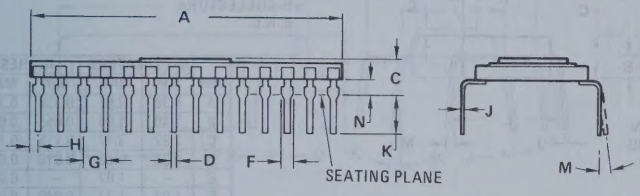
NOTE:
1. LEADS WITHIN 0.13 mm (0.005) DIA OF TRUE POSITION AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	38.61	–	1.520
B	–	21.03	–	0.830
C	6.35	8.13	0.250	0.320
D	0.97	1.09	0.038	0.043
E	–	3.43	–	0.135
F	29.90	30.40	1.177	1.197
G	11.94 BSC		0.470 BSC	
K	7.11	8.13	0.280	0.320
M	36° BSC		36° BSC	
N	18° BSC		18° BSC	
Q	3.84	4.09	0.151	0.161
R	–	26.67	–	1.050

CASE 663-02

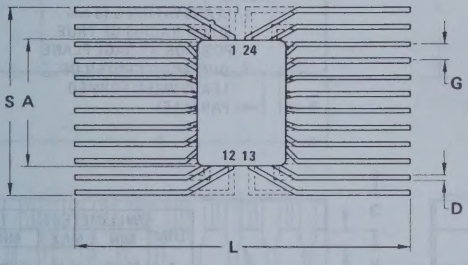


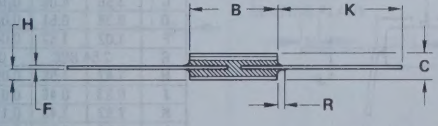
NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.
2. DIMENSION "L" TO CENTER OF LEADS WHEN FORMED PARALLEL.



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	34.42	35.31	1.355	1.390
B	12.45	12.95	0.490	0.510
C	2.54	3.94	0.100	0.155
D	0.38	0.51	0.015	0.020
F	1.14	1.40	0.045	0.055
G	2.54 BSC		0.100 BSC	
H	0.69	1.14	0.027	0.045
J	0.23	0.33	0.009	0.013
K	2.67	3.94	0.105	0.155
L	14.99	15.49	0.590	0.610
M	–	7°	–	7°
N	1.02	1.78	0.040	0.070

CASE 667-03

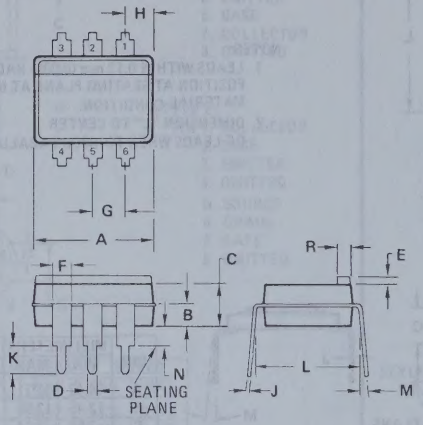




NOTES:
1. DIM "R" IS ALLOWABLE MENISCUS.
2. DIM "G" IS TO CENTER OF LEADS & LEADS TO BE WITHIN .13 mm (0.005") RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.
3. DOTTED LEAD CONFIGURATION IS OPTIONAL.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.53	9.91	0.375	0.390
B	6.10	6.86	0.240	0.270
C	–	2.03	–	0.080
D	0.31	0.46	0.012	0.018
F	0.08	0.15	0.003	0.006
G	1.27 BSC		0.050 BSC	
H	0.51	1.02	0.020	0.040
K	6.73	9.40	0.265	0.370
L	19.56	–	0.770	–
R	–	0.25	–	0.010
S	14.27	14.43	0.562	0.568

CASE 673-04



STYLE 1:
PIN 1. ANODE
2. CATHODE
3. N.C.
4. ANODE
5. CATHODE
6. N. C.

STYLE 2
PIN 1. ANODE
2. CATHODE
3. N.C.
4. EMITTER
5. COLLECTOR
6. BASE

STYLE 3:
PIN 1. ANODE
2. CATHODE
3. N.C.
4. EMITTER
5. COLLECTOR
6. N.C.

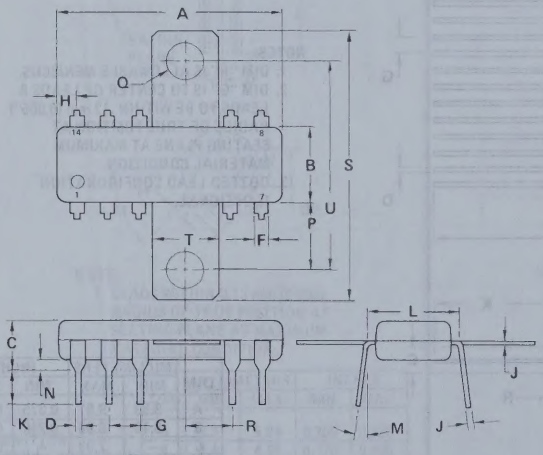
STYLE 4:
PIN 1. ANDOE
2. CATHODE
3. N.C.
4. CATHODE
5. ANODE
6. GATE

STYLE 5:
PIN 1. ANODE
2. CATHODE
3. N.C.
4. OUTPUT
5. GROUND
6. V_{CC}

NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.
2. DOT OR INDEX FOR PIN NO. 1 ORIENT.

	MILLIMETERS		INCHES	
DIM	MIN	MAX	MIN	MAX
A	8.38	8.89	0.330	0.350
B	1.40	1.65	0.055	0.065
C	2.92	3.17	0.115	0.125
D	0.38	0.53	0.015	0.021
E	–	1.02	–	0.040
F	1.02	1.27	0.040	0.050
G	2.54 BSC		0.100 BSC	
H	1.57	1.83	0.062	0.072
J	0.23	0.28	0.009	0.011
K	2.54	3.81	0.100	0.150
L	7.37	7.87	0.290	0.310
M	–	10^0	–	10^0
N	0.51	1.27	0.020	0.050
R	–	1.90	–	0.075

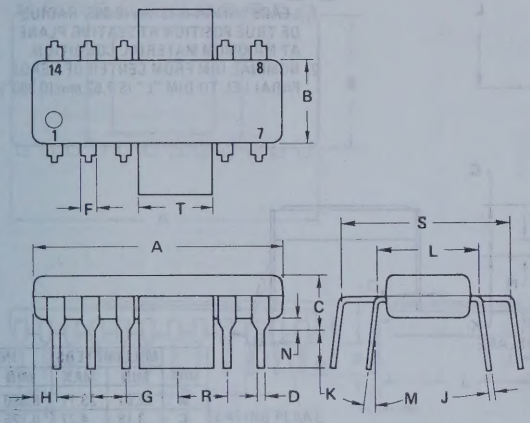
CASE 675-02



NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT GAGE PLANE
2. DIM "L" TO CENTER OF LEADS WHEN FORMED PARALLEL.

	MILLIMETERS		INCHES	
DIM	MIN	MAX	MIN	MAX
A	18.42	19.05	0.725	0.750
B	5.97	6.48	0.235	0.255
C	3.56	4.06	0.140	0.160
D	0.38	0.51	0.015	0.020
F	1.02	1.52	0.040	0.060
G	2.54 BSC		0.100 BSC	
H	1.47	1.98	0.058	0.078
J	0.33	0.46	0.013	0.018
K	2.92	3.43	0.115	0.135
L	7.37	7.87	0.290	0.310
M	–	10^0	–	10^0
N	0.51	1.02	0.020	0.040
P	5.33	5.97	0.210	0.235
Q	3.05	3.30	0.120	0.130
R	3.81 BSC		0.150 BSC	
S	21.82	23.34	0.859	0.919
T	5.21	5.84	0.205	0.230
U	17.15	17.91	0.675	0.705

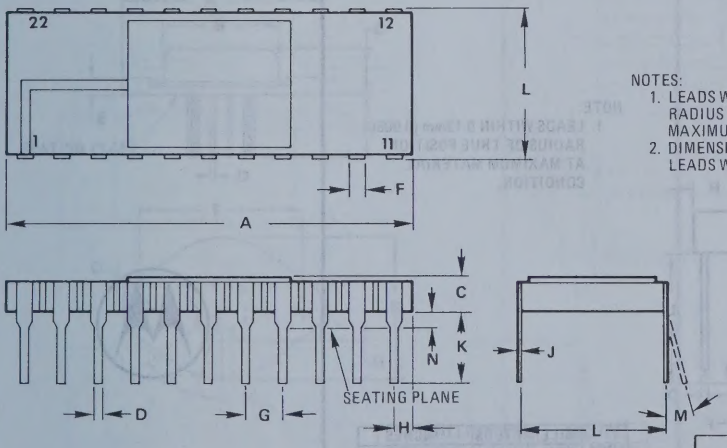
CASE 676-02



NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT GAGE PLANE.
2. DIM "L" & "S" TO CENTER OF LEADS WHEN FORMED PARALLEL.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	18.42	19.05	0.725	0.750
B	5.97	6.48	0.235	0.255
C	3.56	4.06	0.140	0.160
D	0.38	0.51	0.015	0.020
F	1.02	1.52	0.040	0.060
G	2.54 BSC		0.100 BSC	
H	1.47	1.98	0.058	0.078
J	0.33	0.46	0.013	0.018
K	2.92	3.43	0.115	0.135
L	7.37	7.87	0.290	0.310
M	–	10^0	–	10^0
N	0.51	1.02	0.020	0.040
R	3.81 BSC		0.150 BSC	
S	12.45	12.95	0.490	0.510
T	5.21	5.84	0.205	0.230

CASE 677-03

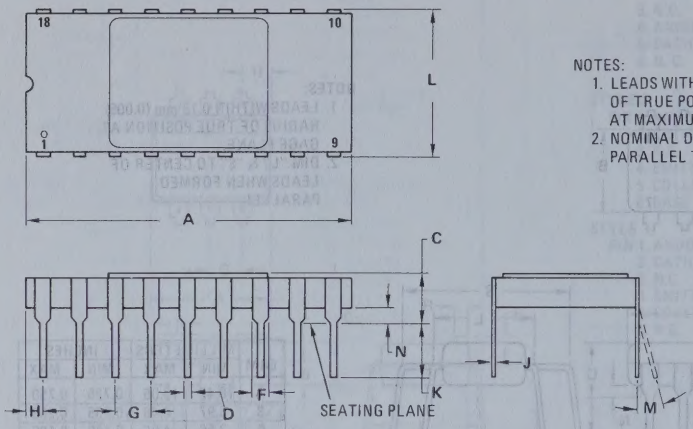


NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT MAXIMUM MATERIAL CONDITION.
2. DIMENSION "L" TO CENTER OF LEADS WHEN FORMED PARALLEL.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	27.05	27.94	1.065	1.100
C	2.16	3.68	0.085	0.145
D	0.43	0.58	0.017	0.023
F	1.02 REF		0.040 REF	
G	2.54 BSC		0.100 BSC	
H	0.76	1.78	0.030	0.070
J	0.20	0.30	0.008	0.012
K	3.18	4.45	0.125	0.175
L	9.65	10.67	0.380	0.420
M	–	7^0	–	7^0
N	0.64	1.27	0.025	0.050

9

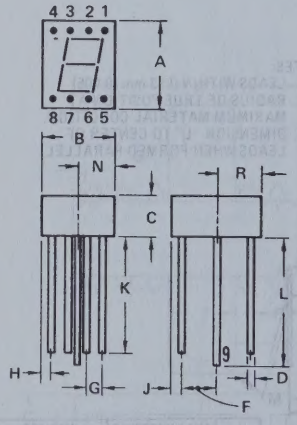
CASE 680-03



NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.
2. NOMINAL DIM FROM CENTER OF LEADS PARALLEL TO DIM "L" IS 7.62 mm (0.300").

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	22.61	23.11	0.890	0.910
C	3.18	4.27	0.125	0.168
D	0.43	0.58	0.017	0.023
F	0.89	1.14	0.035	0.045
G	2.54 BSC		0.100 BSC	
H	1.14	1.40	0.045	0.055
J	0.20	0.30	0.008	0.012
K	3.56	3.68	0.140	0.145
L	7.82	7.92	0.308	0.312
M	–	10^0	–	10^0
N	1.02	1.52	0.040	0.060

CASE 683-01

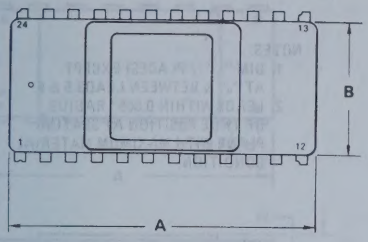


NOTE:
1. LEADS WITHIN 0.13mm (0.005) RADIUS OF TRUE POSITION AT MAXIMUM MATERIAL CONDITION.

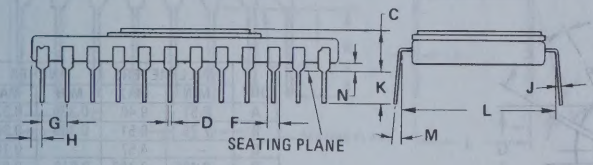
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.73	6.99	0.265	0.275
B	5.46	5.72	0.215	0.225
C	–	3.56	–	0.140
D	0.41	0.51	0.016	0.020
F	2.54 BSC		0.100 BSC	
G	1.27 BSC		0.050 BSC	
H	0.76	0.89	0.030	0.035
J	0.89	1.02	0.035	0.040
K	8.64	9.14	0.340	0.360
L	10.16	10.41	0.400	0.410
N	2.79 BSC		0.110 BSC	
R	3.43 BSC		0.135 BSC	

9

CASE 684-04

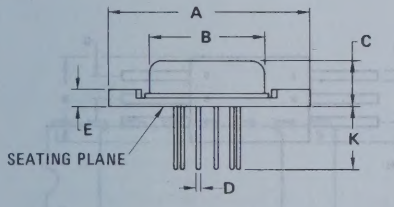


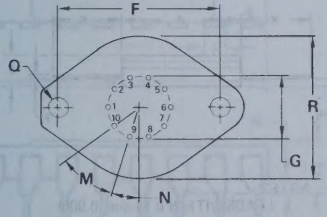
NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE WITH MAXIMUM MATERIAL CONDITION.
2. LEAD NO. 1 CUT FOR IDENTIFICATION, OR BUMP ON TOP.
3. DIM "L" TO INSIDE OF LEADS. (MEASURED 0.51 mm (0.020) BELOW PKG BASE)



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	29.34	30.86	1.155	1.215
B	12.70	14.22	0.500	0.560
C	3.05	3.94	0.120	0.155
D	0.38	0.51	0.015	0.020
F	0.89	1.40	0.035	0.055
G	2.54 BSC		0.100 BSC	
H	0.89	1.40	0.035	0.055
J	0.20	0.30	0.008	0.012
K	2.92	3.68	0.115	0.145
L	14.86	15.87	0.585	0.625
M	–	15^0	–	15^0
N	0.51	1.14	0.020	0.045

CASE 685-01

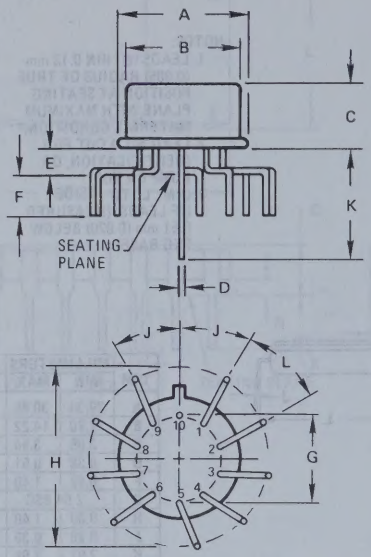




NOTE:
1. LEADS WITHIN 0.13 mm (0.005) DIA OF TRUE POSITION AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	–	38.61	–	1.520
B	–	21.08	–	0.830
C	6.35	8.13	0.250	0.320
D	0.97	1.09	0.038	0.043
E	–	3.43	–	0.135
F	29.90	30.40	1.177	1.197
G	11.94 BSC		0.470 BSC	
K	7.11	8.13	0.280	0.320
M	36^0 BSC		36^0 BSC	
N	18^0 BSC		18^0 BSC	
Q	3.84	4.09	0.151	0.161
R	–	26.67	–	1.050

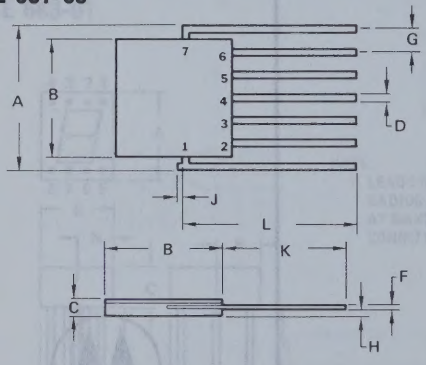
CASE 686-01



NOTES:
1. DIM "L" (7 PLACES) EXCEPT AT "J" & BETWEEN LEADS 5 & 6.
2. LEADS WITHIN 0.005" RADIUS OF TRUE POSITION AT SEATING PLANE WITH MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.51	9.40	0.335	0.370
B	7.75	8.51	0.305	0.335
C	–	4.57	–	0.180
D	0.406	0.483	0.016	0.019
E	1.78	2.54	0.070	0.100
F	3.05	3.81	0.120	0.150
G	5.84 TP		0.230 TP	
H	12.19 TP		0.480 TP	
J	31° TP		31° TP	
K	5.97	6.73	0.235	0.265
L	34° TP		34° TP	

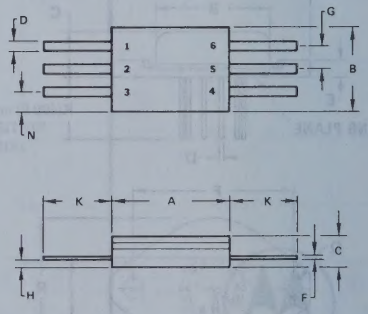
CASE 687-03



NOTES:
1. LEAD NO. 1 IDENTIFIED BY TAB ("J").
2. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.03	8.08	0.316	0.318
B	5.97	6.35	0.235	0.250
C	1.52	1.78	0.060	0.070
D	0.41	0.46	0.016	0.018
F	0.10	0.15	0.004	0.006
G	1.27 BSC		0.050 BSC	
H	–	0.64	–	0.025
J	–	0.38	–	0.015
K	1.78	–	0.070	–
L	–	12.45	–	0.490

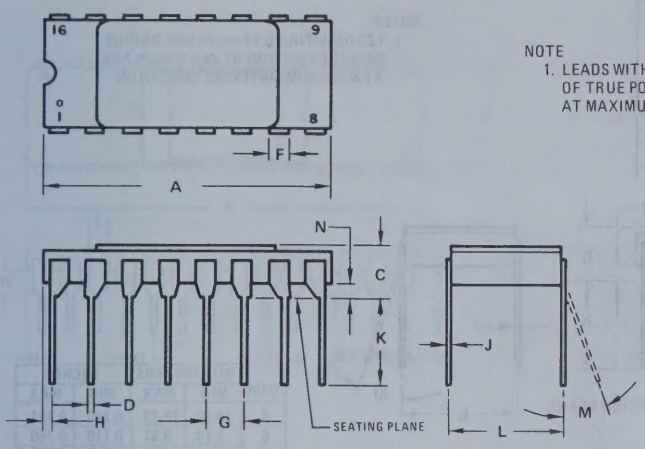
CASE 688-04



NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.97	6.73	0.235	0.265
B	4.32	5.33	0.170	0.210
C	1.17	1.91	0.046	0.075
D	0.25	0.48	0.010	0.019
F	0.08	0.15	0.003	0.006
G	1.27 BSC		0.050 BSC	
H	0.13	0.89	0.005	0.035
K	2.34	2.84	0.092	0.112
N	0.89	1.40	0.035	0.055

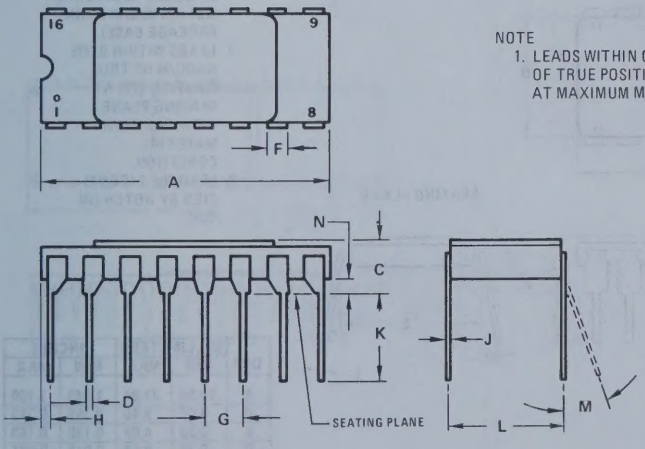
CASE 690-03



NOTE
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.

	MILLIMETERS		INCHES	
DIM	MIN	MAX	MIN	MAX
A	18.80	19.23	0.740	0.757
C	2.82	4.80	0.111	0.189
D	0.43	0.58	0.017	0.023
F	1.14	1.52	0.045	0.060
G	2.54 BSC		0.100 BSC	
H	0.51	0.71	0.020	0.028
J	0.20	0.31	0.008	0.012
K	2.92	4.19	0.115	0.165
L	7.62 BSC		0.300 BSC	
M	–	10^0	–	10^0
N	0.51	–	0.020	–

CASE 690-04

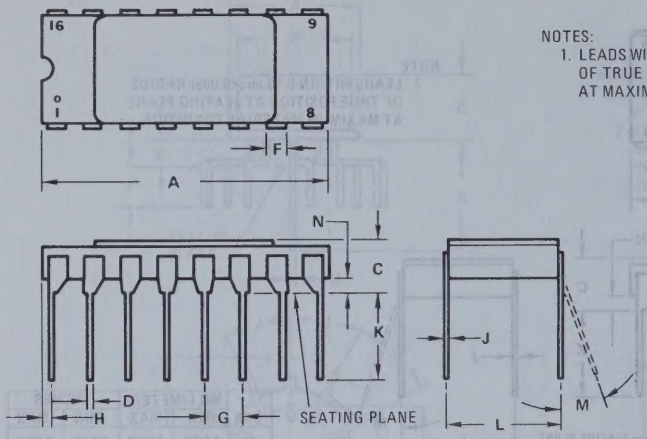


NOTE
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.

	MILLIMETERS		INCHES	
DIM	MIN	MAX	MIN	MAX
A	20.07	20.57	0.790	0.810
C	–	3.10	–	0.122
D	0.38	0.53	0.015	0.021
F	1.14	1.40	0.045	0.055
G	2.54 BSC		0.100 BSC	
H	1.14	1.40	0.045	0.055
J	0.20	0.31	0.008	0.012
K	5.08	–	0.200	–
L	7.62 BSC		0.300 BSC	
M	–	10^0	–	10^0
N	1.07	1.32	0.042	0.052

9

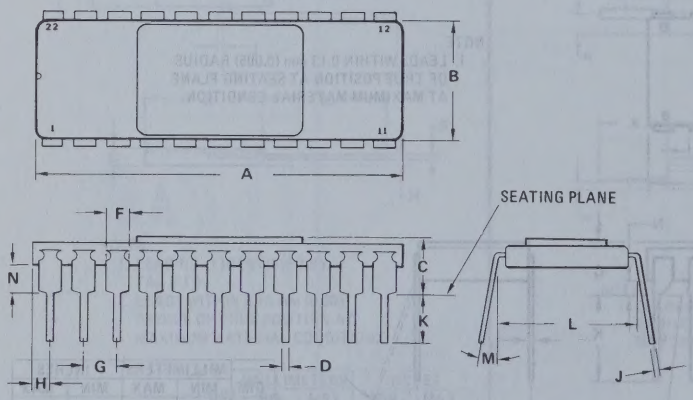
CASE 690-05



NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	18.80	19.23	0.740	0.757
C	2.79	3.81	0.110	0.150
D	0.41	0.51	0.016	0.020
F	1.14	1.52	0.045	0.060
G	2.54 BSC		0.100 BSC	
H	0.33	0.89	0.013	0.035
J	0.20	0.30	0.008	0.012
K	3.56	4.06	0.140	0.160
L	7.62 BSC		0.300 BSC	
M	–	10^0	–	10^0
N	0.76	1.14	0.030	0.045

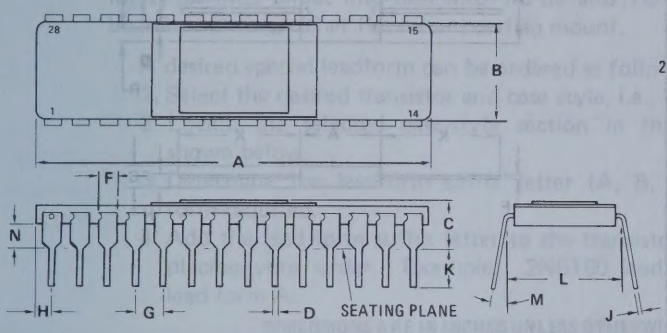
CASE 694-03



NOTES:
1. DIM "L" TO INSIDE OF LEADS (MEASURED 0.51 mm (0.020) FROM PACKAGE BASE)
2. LEADS WITHIN 0.005 RADIUM OF TRUE POSITION (TP) AT SEATING PLANE WITH MAXIMUM MATERIAL CONDITION.
3. LEAD No. 1 IDENTIFIED BY NOTCH ON TOP.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	26.54	27.94	1.045	1.100
B	9.02	9.40	0.355	0.370
C	3.30	4.06	0.130	0.160
D	0.38	0.53	0.015	0.021
F	1.02	1.27	0.040	0.050
G	2.54 BSC		0.100 BSC	
H	0.89	1.40	0.035	0.055
J	0.20	0.30	0.008	0.012
K	2.92	3.68	0.115	0.145
L	9.78	10.79	0.385	0.425
M	–	15^0	–	15^0
N	0.51	1.52	0.020	0.060

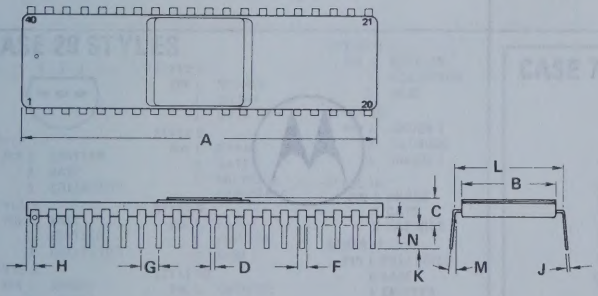
CASE 695-04



NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE WITH MAXIMUM MATERIAL CONDITION.
2. DIM "L" TO INSIDE OF LEADS (MEASURED 0.51 mm (0.020) BELOW PACKAGE BASE)

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	34.04	35.56	1.340	1.400
B	12.70	13.84	0.500	0.545
C	3.05	4.19	0.120	0.165
D	0.38	0.51	0.015	0.020
F	0.89	1.40	0.035	0.055
G	2.54 BSC		0.100 BSC	
H	0.89	1.40	0.035	0.055
J	0.20	0.30	0.008	0.011
K	2.92	3.68	0.115	0.145
L	14.86	15.87	0.585	0.625
M	–	15^0	–	15^0
N	0.51	1.27	0.020	0.050

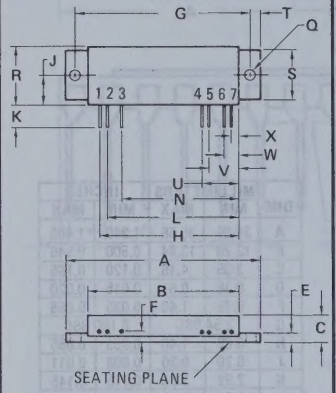
CASE 699-03



NOTES:
1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE, AT MAXIMUM MATERIAL CONDITION.
2. DIMENSION "L" TO INSIDE OF LEADS (MEASURED 0.51 mm (0.020) BELOW PACKAGE BASE)

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	50.04	51.05	1.970	2.010
B	13.46	13.72	0.530	0.540
C	3.05	3.94	0.120	0.155
D	0.38	0.51	0.015	0.020
F	0.89	1.40	0.035	0.055
G	2.54 BSC		0.100 BSC	
H	0.89	1.40	0.035	0.055
J	0.20	0.28	0.008	0.011
K	3.05	3.68	0.120	0.145
L	14.86	15.87	0.585	0.625
M	–	15^0	–	15^0
N	0.51	1.14	0.020	0.045

CASE 700-02

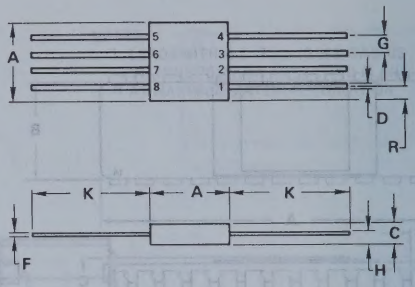


STYLE 1:
PIN 1. RF OUTPUT
2. GROUND
3. D.C. TERMINAL
4. GROUND
5. D.C. GAIN
6. GROUND
7. RF INPUT

NOTE:
1. MOUNTING HOLES WITHIN 0.13 mm (0.005) DIA OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	67.06	67.56	2.640	2.660
B	52.32	52.83	2.060	2.080
C	8.51	8.89	0.335	0.350
E	2.54	2.79	0.100	0.110
F	2.67	2.92	0.105	0.115
G	61.09 BSC		2.405 BSC	
H	47.88	48.64	1.885	1.915
J	10.67	11.18	0.420	0.440
K	5.84	7.62	0.230	0.300
L	45.34	46.10	1.785	1.815
N	40.26	41.02	1.585	1.615
Q	3.45	3.71	0.136	0.146
R	20.32	20.57	0.800	0.810
S	17.02	17.53	0.670	0.690
T	2.98	3.24	0.1175	0.1275
U	12.32	13.08	0.485	0.515
V	9.78	10.54	0.385	0.415
W	4.70	5.46	0.185	0.215
X	2.16	2.92	0.085	0.115

CASE 702-01



NOTE:
1. LEADS WITHIN 0.25 mm (0.010) TOTAL OF TRUE POSITION AT BODY AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.02	6.22	0.237	0.245
C	1.17	1.78	0.046	0.070
D	0.41	0.46	0.016	0.018
F	0.10	0.15	0.004	0.006
G	1.27 BSC		0.050 BSC	
H	0.38	0.76	0.015	0.030
K	6.35	6.86	0.250	0.270
R	1.09	1.22	0.043	0.048

LEADFORMS
FOR PLASTIC POWER SOCKETS

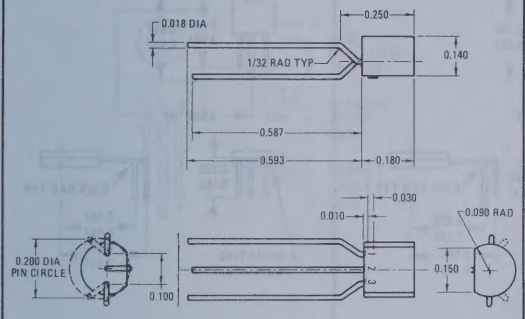
Plastic power transistors can be lead formed to a variety of configurations for insertion into sockets designed for metal-can devices. Leadform flexibility permits direct insertion into TO-66 and TO-5 sockets, or circuit-board mounting, either flat mount or flag mount.

A desired special leadform can be ordered as follows:

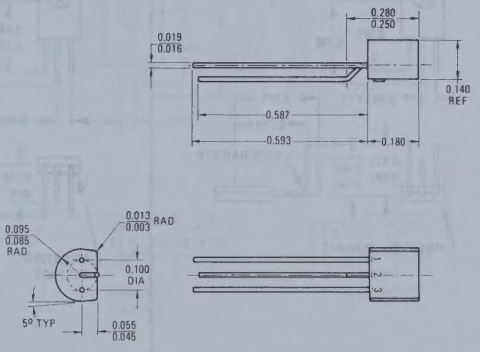
1. Select the desired transistor and case style, i.e., 2N5190 or MJE340.
2. Locate the selected case-style section in the leadform diagrams shown below.
3. Determine the leadform suffix letter (A, B, C, etc.) of the lead form required.
4. Add the lead form suffix letter to the transistor type number when placing your order. Example: 2N5190 lead form B; or MJE340 lead form A.

DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

CASE 29
LEAD FORM "A"
(TO-92 TO FIT TO-5)



CASE 29
LEAD FORM "B"
(TO-92 TO FIT TO-18)



CASE 29 STYLES

STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR

STYLE 2:
PIN 1. BASE
2. EMITTER
3. COLLECTOR

STYLE 3:
PIN 1. ANODE
2. ANODE
3. CATHODE

STYLE 4:
PIN 1. CATHODE
2. CATHODE
3. ANODE

STYLE 5:
PIN 1. DRAIN
2. SOURCE
3. GATE

STYLE 6:
PIN 1. GATE
2. SOURCE& SUBSTRATE
3. DRAIN

STYLE 7:
PIN 1. SOURCE
2. DRAIN
3. GATE

STYLE 8:
PIN 1. DRAIN
2. GATE
3. SOURCE & SUBSTRATE

STYLE 9:
PIN 1. BASE 1
2. EMITTER
3. BASE 2

STYLE 10:
PIN 1. CATHODE
2. GATE
3. ANODE

STYLE 11:
PIN 1. ANODE
2. CATHODE & ANODE
3. CATHODE

STYLE 12:
PIN 1. MAIN TERMINAL 1
2. GATE
3. MAIN TERMINAL 2

STYLE 13:
PIN 1. ANODE 1
2. GATE
3. CATHODE 2

STYLE 14:
PIN 1. EMITTER
2. COLLECTOR
3. BASE

STYLE 15:
PIN 1. ANODE 1
2. CATHODE
3. ANODE 2

STYLE 16:
PIN 1. ANODE
2. GATE
3. CATHODE

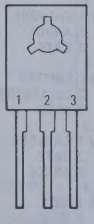
STYLE 17:
PIN 1. COLLECTOR
2. BASE
3. EMITTER

STYLE 18:
PIN 1. ANODE
2. CATHODE
3. NOT CONNECTED

STYLE 19:
PIN 1. GATE
2. ANODE
3. CATHODE

STYLE 20:
PIN 1. N.C.
2. CATHODE
3. ANODE

CASE 77 STYLES



STYLE 1
PIN 1. EMITTER
2. COLLECTOR
3. BASE

STYLE 2
PIN 1. CATHODE
2. ANODE
3. GATE

STYLE 3
PIN 1. BASE
2. COLLECTOR
3. EMITTER

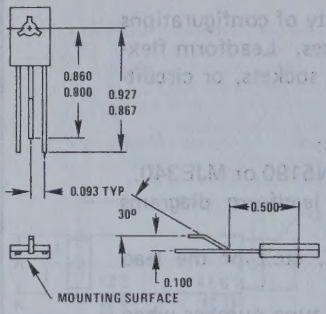
STYLE 4
PIN 1. ANODE 1
2. ANODE 2
3. GATE

STYLE 5
PIN 1. MT1
2. MT2
3. GATE

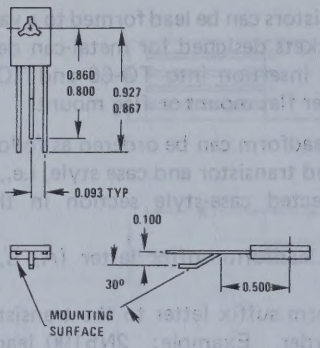
NOTE:
1. MT = MAIN TERMINAL

9

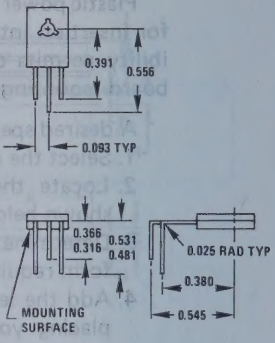
CASE 77
LEAD FORM "A"



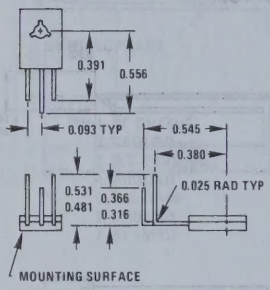
CASE 77
LEAD FORM "B"



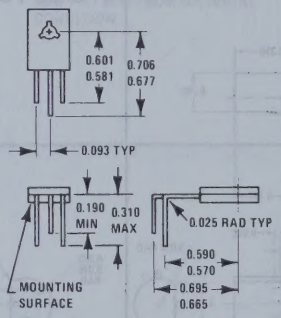
CASE 77
LEAD FORM "C"



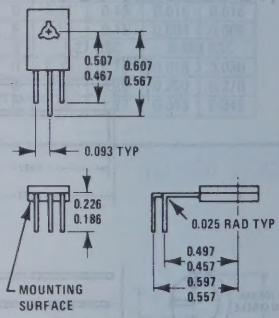
CASE 77
LEAD FORM "D"



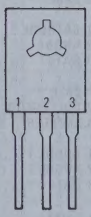
CASE 77
LEAD FORM "E"



CASE 77
LEAD FORM "F"



CASE 90 STYLES



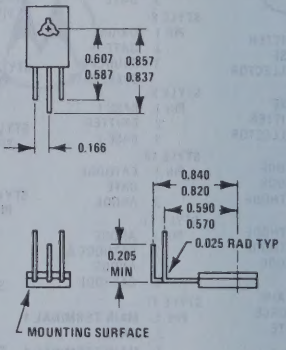
STYLE 1
PIN 1. CATHODE
2. ANODE
3. GATE

STYLE 2
PIN 1. EMITTER
2. COLLECTOR
3. BASE

STYLE 3
PIN 1. CATHODE
2. GATE
3. ANODE

STYLE 4
PIN 1. MT 1
2. MT 2
3. GATE

CASE 90
LEAD FORM "A"



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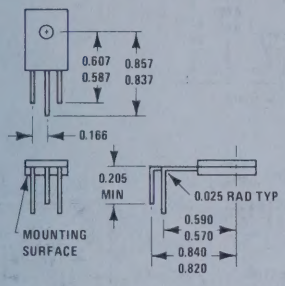
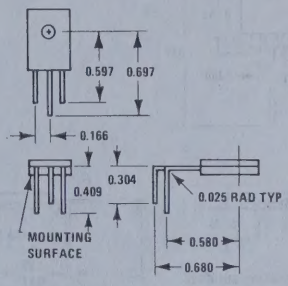
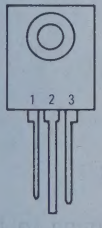
CASE 90
LEAD FORM "B"



CASE 90
LEAD FORM "C"



CASE 199 STYLES

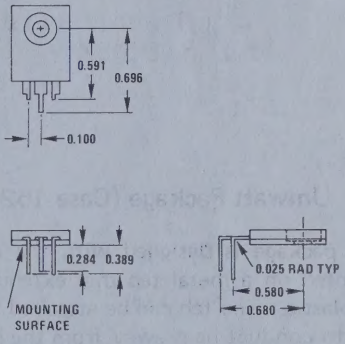


STYLE 1:
PIN 1. BASE
2. COLLECTOR
3. EMITTER

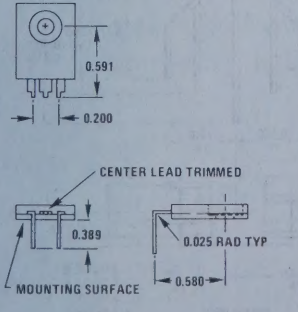
STYLE 2:
PIN 1. CATHODE
2. ANODE
3. GATE

STYLE 3:
PIN 1. ANODE 1
2. ANODE 2
3. GATE

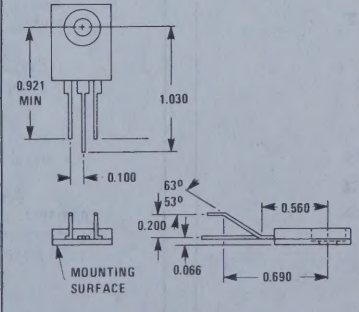
CASE 199
LEAD FORM "A"



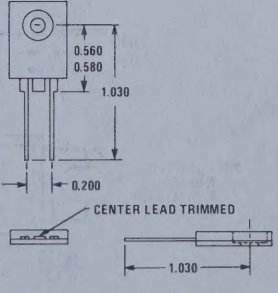
CASE 199
LEAD FORM "B"



CASE 199
LEAD FORM "C"



CASE 199
LEAD FORM "D"



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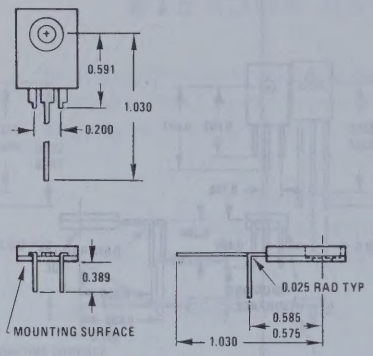
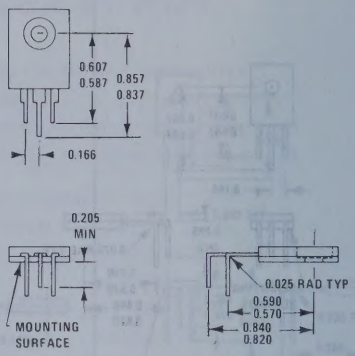
CASE 199
LEAD FORM "E"



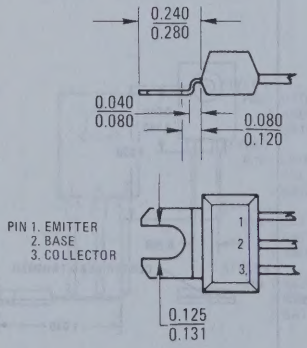
CASE 199
LEAD FORM "F"



Uniwatt Package (Case 152)

This package is designed with the collector mounted on a metal tab that extends out of the plastic. The tab can be attached to a heat sink to conduct heat away from the junction.

CASE 152

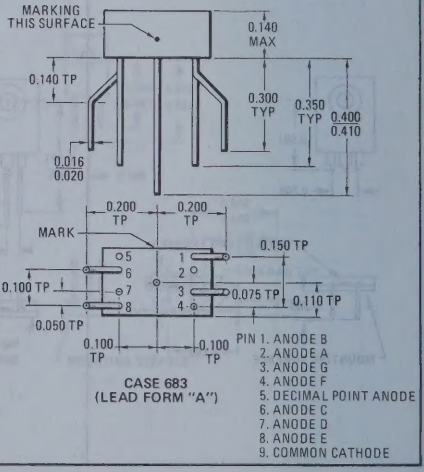


Tab formed for flush mounting available on request.

CASE 683

This package has lead forming to facilitate insertion into a P C board with leads on .100" centers.

CASE 683
LEAD FORM "A"



Motorola offers a wide variety of technical literature to assist you in the selection and application of semiconductors. Many publications are available, ranging from comprehensive data books and catalogs, to informative engineering bulletins, brochures and application notes.

Most publications are available at no cost. Others may be purchased at prices which barely cover the costs of printing and distribution.

Check the listing that follows. Chances are there's a Motorola publication available right now that will furnish some of the design solutions you've been looking for. To obtain information write to Technical Information Center, Motorola Semiconductor Products Inc., P.O. Box 20912, Phoenix, Arizona 85036 and list publications by title and number.

Index **Page No.**

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Brochures 10-4
Application Note Selector Guide 10-5
Application Note Abstracts 10-11
Engineering Bulletins 10-30

Literature Listing

10

DATA BOOKS

THE SEMICONDUCTOR DATA LIBRARY – Provides technical data on a wide variety of discrete devices, as well as digital and linear integrated circuits. This reference library is made up of the following volumes .....

Master Index – A self-contained compendium of semiconductor devices provides major electrical specifications for all EIA registered semiconductors, and for all Motorola house-numbered devices. This volume enables the user to locate and select devices for most any application of specific circuit .

Volume I – Includes complete data sheets for EIA registered type numbers available from Motorola up to 1N4999 and 2N4999 .

Volume II – Includes complete data sheets for EIA registered type numbers available from Motorola from 1N5000 and 2N5000 and up .

Volume III – Includes complete specifications for all Motorola discrete component non-registered device type numbers .

Semiconductor Chips Data Book – This comprehensive reference contains complete information and ordering procedures for standard Motorola active and passive component chips and wafers. Data covers conventional, flip-chip and beam-lead forms. Also included are geometries, metallization, chip dimensions, and handling information for Motorola's most populsr devices, covering all product lines – both discretes and IC's .

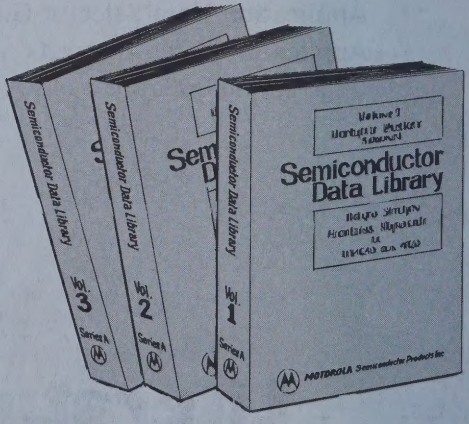
The MECL Data Book – Volume IV – Provides detailed specifications, plus family and systems characteristics of the entire MECL family of circuits and lists data on all currently available devices, including the popular MECL 10,000 family.

A general information section provides comparative data for all of the MECL lines .

The McMOS Data Book – This fact-packed reference volume contains detailed design information followed by abstracts of available Motorola application notes and other McMOS reference literature. Also included are a McMOS selector guide, a general characteristics section and complete data sheets on individual McMOS devices .

The Linear IC Data Book – Complete data sheets of Motorola's broad linear line including operational amplifiers, voltage regulators, high-frequency circuits, multipliers, modulators, detectors, radio-TV types, automotive types, linear-digital inter-face circuits, and a variety of special purpose devices. In addition, selection guides, package dimensions and application note references are also included.

Phase-Locked Loop Systems Data Book – Included are specifications covering various functions from a variety of logic families, allowing the designer a multitude of design variations to meet optimum design objectives. System trade-offs and advantages are discussed. Product data for phase-detectors, oscillators-multivibrators, mixers and counters are detailed to simplify product selection .



HANDBOOKS

THE MECL SYSTEM DESIGN HANDBOOK – Comprised of ten chapters, the handbook includes over 200 illustrations providing circuit and waveform diagrams as well as numerical data. Wiring rules and system techniques are covered for MECL II, III and the popular, low-power, high-speed MECL 10,000.

SWITCHING TRANSISTOR HANDBOOK – A switching transistor manual that not only provides detailed design procedures for saturated-mode, current-mode (ECL) and avalanche-mode circuits, but also relates much needed device characterization and reliability data to practical worst-case circuit design .

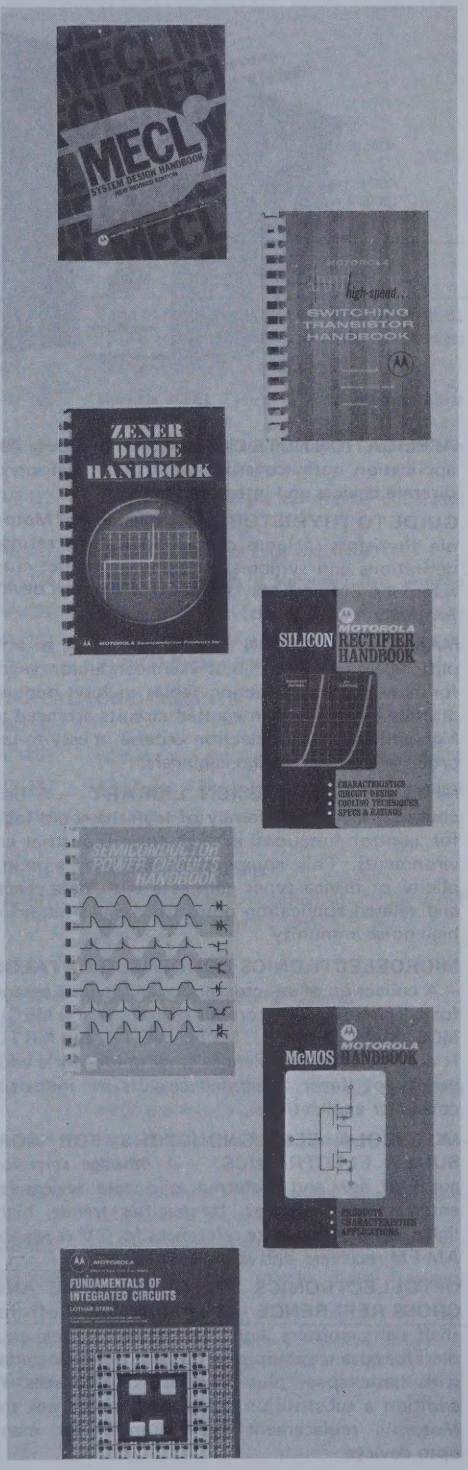
ZENER DIODE HANDBOOK – Includes theory and practical "how-to-do-it", information for zener diodes, reference diodes, reference amplifiers, current regulators and more .

SILICON RECTIFIER HANDBOOK – Thirteen chapters devoted to Characteristics, Circuit Design, Cooling Techniques, and Specs & Ratings. It also presents thermal properties, filter systems, voltage multiplier circuits, transient protection, and power supply design .

SEMICONDUCTOR POWER CIRCUITS HANDBOOK – This handbook details practical circuits using power transistors, thyristors, rectifiers and regulator diodes. Applications include speed controls, inverters, regulators, solid-state static switching of both ac and dc source voltages, servo and audio amplifiers (1 to 50 watts) .

McMOS HANDBOOK – Discusses CMOS characteristics, fundamental logic configurations, and system design considerations for this popular low-power digital family. In addition, this handbook provides applications information, family data, and logic diagrams .

TEXTBOOK
FUNDAMENTALS OF INTEGRATED CIRCUITS – Although intended primarily as an introductory guide for IC engineers and electronic technicians, the book is written to be readily understandable by almost anyone with a good, basic semiconductor background. Among the many topics covered are integrated circuit theory, manufacture and applications – using a minimum of mathematics .



BROCHURES

APPLICATION NOTE CATALOG – Lists over 200 application notes covering the broad spectrum of discrete devices and integrated circuits.

GUIDE TO THYRISTORS – An overview of Motorola thyristors includes characteristics and ratings, definitions and symbols, uses and a product cross reference. Provides easy selection of the best device for many requirements.

MASTER SELECTION GUIDE – A guide to simplify selection of the "best" semiconductor device for new designs. Selection tables include popular discrete devices and integrated circuits arranged to highlight the prime selection criteria in easy-to-use order. A must for design engineers.

MHTL SYSTEMS DESIGN LIBRARY – A brochure of Motorola's family of high-threshold logic for control functions in high-noise industrial environments. This compendium contains a multiplicity of device types complete with data sheets and related application notes for designs requiring high-noise immunity.

MICROELECTRONICS CONDENSED CATALOG – A collection of selector guides and logic diagrams for all circuits in Motorola's digital lines – MECL, MOS, McMOS, MHTL, MTTL, MDTL, and MRTL. It also includes complete selector guides for a wide variety of linear integrated circuits for industrial consumer applications.

MOTOROLA SEMICONDUCTORS FOR CONSUMER ELECTRONICS – A 48-page selection guide of new and preferred solid-state devices for entertainment systems. It specifies trends, highlights, application note references for TV receivers, AM-FM receivers, and audio systems.

OPTOELECTRONICS SELECTOR GUIDE AND CROSS REFERENCE – A compendium of off-the-shelf light emitters, light sensors and optical couplers for advance equipment designs. Selector guides with basic specs plus a variety of packages. In addition a substitution guide cross references the Motorola replacement type number for many opto devices.

OPTO-COUPLERS AT WORK – A 20-page brochure presenting typical circuits and applications using optical couplers in control circuits, solid-state relays, and wire communications.

RF DESIGN GUIDE – RF device and power varactor data presented in selection guide format by design application. Includes functional system complements for equipment operating at a variety of power levels, in frequency ranges from 2 MHz to 1 GHz.

SELECTION AND USE OF FETS – An overview of a wide variety of junction FETs and MOS FETs with N- or P- channel polarity – both single and dual gates. Typical circuit applications, selector guides, packaging, and a cross reference provide valuable FET design information.

SMALL SIGNAL PLASTIC TRANSISTOR SELECTION GUIDE AND CROSS REFERENCE – This directory is designed to afford selection of the right silicon plastic transistor for specific applications. It presents a wide range of device types in four basic package configurations.

SEMICONDUCTORS FOR COMMUNICATIONS SYSTEMS – A cross-section of semiconductors in the context to their applications in two major sections:

Part I – Radio Transmission and Reception

Part II – Wire Communications

Easy to use selection guides for both discrete devices and integrated circuits provide important parameter data for electronic communication applications.

BEAM-LEAD FACT BOOK – An overview of beam-lead devices and beam-lead chips with basic specs and dimensioned drawings. In addition, separate sections dealing with beam-lead economics and technology are included for readers requiring this background information to help them determine the adaptability of beam-lead components to their applications.

APPLICATION NOTE SELECTOR GUIDE AND ABSTRACTS

SELECTOR GUIDE

The Applications Notes listed below and described in the subsequent section, have been prepared to acquaint the circuits and systems engineer with the broad line of Motorola Semiconductor Products and their applications.

To obtain copies of these notes, simply list the AN number or numbers and send your request on your company letterhead to: Technical Information Center, Motorola Semiconductor Products Inc., P.O. Box 20912, Phoenix, Arizona 85036.

APPLICATION NOTE NUMBER	TITLE
AUDIO AMPLIFIERS	
AN-182	A Method of Predicting Thermal Stability
AN-401	The MC1554 One-Watt Monolithic Integrated Circuit Power Amplifier
AN-426A	Low Power Audio Amplifiers Using Complementary Plastic Transistors
AN-483B	20 and 30 Watt Power Amplifiers Using Darlington Output Transistors
AN-484A	Medium Power Audio Amplifiers
AN-485	High-Power Audio Amplifiers with Short-Circuit Protection
COMPUTER	
AN-245A	An Integrated Core Memory Sense Amplifier
AN-464	MTTL Designer's Note — The MC4004/MC4005, A 16-Bit Random Access Memory
AN-465	MTTL Designer's Note — The MC4006/MC4007 Decoders
AN-474	The MC1541 — A Gated Dual-Channel Sense Amplifier for Core Memories
AN-476	MTTL Designer's Note—The MC4000 Data Selector and the MC4002 Data Distributor
AN-487	A High-Speed Ripple-Through Arithmetic Processor
AN-488	High-Speed Addition Using Lookahead Carry Techniques
AN-496A	Error Detection and Correction Using Exclusive-OR Gates and Parity Trees
AN-505	The MC4012, an MTTL 4-Bit Shift Register
AN-506	Code Conversion with Semiconductor Read Only Memories
AN-530A	The MC7491A Eight-Bit Serial Shift Register and the MC7495 Four-Bit Shift Register
AN-533	Semiconductors for Plated-Wire Memories
AN-547	A High Speed Dual Differential Comparator, the MC1514
AN-550	Programming the MCM5003/5004 Programmable Read Only Memory
AN-573	Engineering Report: A Comparison Between MECL 10,000 and Schottky TTL Minicomputer Designs
AN-576	The Logical Design of Shift Counters
AN-700	Simulate MECL System Interconnections With a Computer Program
AN-711	The Recovery of Recorded Digital Information in Drum, Disk and Tape Systems.
AN-713	Binary D/A Converters can Provide BCD-Coded Conversion
AN-722	Replacing Sequential Logic with ROMS
AN-724	Operational Aspects of Motorola's Data Terminal
AN-726	Bussing with MECL 10,000 Integrated Circuits
AN-730	A High Speed FIFO Memory Using the MECL MC10143 Register File
DIGITAL LOGIC CIRCUITS	
MDTL	
AN-408	Problems and Solutions with MDTL and MRTL
AN-487	A High-Speed Ripple-Through Arithmetic Processor
AN-496A	Error Detection and Correction Using Exclusive-OR Gates and Parity Trees
AN-519	Using MDTL Logic Blocks
AN-707	Noise Immunity Comparison of CMOS Versus Popular Bipolar Logic Families
MECL	
AN-194A	Designing Integrated Serial Counters
AN-270	Nanosecond Pulse Handling Techniques
AN-417	IC Crystal Controlled Oscillators
AN-418	High Speed Monostable Multivibrator Design with MECL Interface Circuits
AN-488	High-Speed Addition Using Lookahead Carry Techniques
AN-496A	Error Detection and Correction Using Exclusive-OR Gates and Parity Trees
AN-504	The MC1600 Series MECL III Gates
AN-532A	MTTL and MECL Avionics Digital Frequency Synthesizer

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APPLICATION NOTE SELECTION GUIDE (continued)

APPLICATION NOTE NUMBER	TITLE
AN-534	Commutating Filter Techniques
AN-536	Micro-T Packaged Transistors for High Speed Logic Systems
AN-556	Interconnection Techniques for Motorola's MECL 10,000 Series Emitter Coupled Logic
AN-565	Using Shift Registers as Pulse Delay Networks
AN-566	High Speed Binary Multiplication Using The MC10181
AN-567	MECL Positive and Negative Logic
AN-572	Initial Reliability Report for MECL 10,000 Integrated Logic Circuits
AN-579	Testing MECL 10,000 Integrated Logic Circuits
AN-581	An MIS 500 MHz Frequency Counter Using MECL and MTTL
AN-583	A MECL 10,000 Main Frame Memory Employing Dynamic MOS RAMS
AN-584	Programmable Counters Using the MC10136 and MC10137 MECL 10,000 Universal Counters
AN-586	Measure Frequency and Propagation Delay With Hgih Speed MECL Circuits
AN-592	AC Noise Immunity of MECL 10,000 Integrated Circuits
AN-700	Simulate MECL System Interconnections With a Computer Program
AN-701	Understanding MECL 10,000 DC and AC Data Sheet Specifications
AN-709	MECL 10,000 Arithmetic Elements, MC10179, MC10180, MC10181
AN-720	Interfacing with MECL 10,000 Integrated Circuits
AN-726	Bussing with MECL 10,000 Integrated Circuits
MHTL	
AN-298	Noise Immunity with High Threshold Logic
AN-414	Operations and Application of MHTL IC Flip-Flops
AN-467	Using Motorola High Threshold Logic
AN-524	Converting Relay Control Systems to Digital ICs
AN-707	Noise Immunity Comparison of CMOS Versus Popular Bipolar Logic Families
AN-712	Interface Techniques Between Industrial Logic and Power Devices
MRTL	
AN-251A	Decade Counters Using MRTL Integrated Circuits
AN-408	Problems and Solutions with MDTL and MRTL
AN-451	A Frequency Counter Using Motorola RTL Integrated Circuits

APPLICATION NOTE NUMBER	TITLE
MTTL	
AN-270	Nanosecond Pulse Handling Techniques
AN-464	MTTL Designer's Note — The MC4004/MC4005, A 16-Bit Random Access Memory
AN-465	MTTL Designer's Note — The MC4006/MC4007 Decoders
AN-476	MTTL Designer's Note — The MC4000 Data Selector and the MC4002 Data Distributor
AN-488	High-Speed Addition Using Lookahead Carry Techniques
AN-492	Operating Characteristics of Motorola MC3000/MC3100 Series Transistor-Transistor Logic Gates
AN-493	The MC3000/MC3100 Series Transistor-Transistor Logic Flip-Flops
AN-496A	Error Detection and Correction Using Exclusive-OR Gates and Parity Trees
AN-505	The MC4012, an MTTL 4-Bit Shift Register
AN-506	Code Conversion with Semiconductor Read Only Memories
AN-528	Binary-to-BCD and BCD-to-Binary Conversion with Complex IC Functions
AN-530A	The MC7491A Eight-Bit Serial Shift Register and the MC7495 Four-Bit Shift Register
AN-532A	MTTL and MECL Avionics Digital Frequency Synthesizer
AN-534	Commutating Filter Techniques
AN-537	The MC4032, an MTTL 4-Bit Universal Counter
AN-541	Medium Scale Integration in the Numerical Control Field
AN-550	Programming the MCM5003/5004 Programmable Read Only Memory
AN-577	Design Techniques for an 80 Watt, 175 MHz Transmitter for 12.5 Volt Operation
AN-578	UHF Microstrip Amplifiers Utilizing G-10 Epoxy-Glass Laminate
AN-581	An MSI 500 MHz Frequency Counter Using MECL and MTTL
AN-707	Noise Immunity Comparison of CMOS Versus Popular Bipolar Logic Families
MOS	
AN-538A	Motorola Complementary MOS Integrated Circuits
AN-562	MOS Dynamic RAMS in Memory Systems
AN-574	CMOS: A New Logic Type for Control Systems
AN-583	A MECL 10,000 Main Frame Memory System Employing Dynamic MOS RAMS
AN-591	Using McMOS in System Designs — Those All-Important Details

APPLICATION NOTE SELECTION GUIDE (continued)

APPLICATION NOTE NUMBER	TITLE
AN-706	A CRT Display System Using NMOS Memories
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ABSTRACTS

AN-139A Understanding Transistor Response Parameters

This note explains high-frequency transistor response parameters and discusses their interdependence. Useful nomograms are given for determining h_{fe}, f_T, $f_{\alpha e}$, f_{max}, and many other parameters.

AN-166 Using Linvill Techniques for RF Amplifiers

A design procedure, derived from theory developed by J. G. Linvill, simplifies the design of single stage small-signal RF amplifiers. A 200 MHz amplifier serves as an example of the technique.

AN-178A Epicap Tuning Diode Theory and Applications

General electronic-tuning considerations are discussed, including important parameters such as Q, tuning range, and temperature stability.

AN-182 A Method of Predicting Thermal Stability

Variations in DC bias current with temperature is an important consideration in the design of reliable transistor audio amplifiers. This note gives a useful method of predicting the thermal stability of biasing circuits.

AN-189 Solid-State Pulse Width Modulation DC Motor Control

Pulse-width modulation, an effective method of DC voltage control, provides motor speed regulation under varying torque conditions - ideal for traction drive vehicles.

AN-194A Designing Integrated Serial Counters

MECL monolithic integrated J-K flip-flops serve as building blocks for ultra-high-speed ripple counters. General design techniques for designing counters of any arbitrary count.

AN-204A The MC1530, MC1531 Integrated Operational Amplifiers

Two new high performance monolithic operational amplifiers feature exceptionally high input impedance and high open loop gain. This note describes the function of each stage in the circuit, methods of frequency compensating and DC biasing. Four applications are discussed: a summing circuit, an integrator, a DC comparator, and transfer function simulation.

AN-210 FM Modulation Capabilities of Epicap VVC's

The author shows by empirical methods that the frequency vs. voltage curve for Epicap voltage variable capacitors is linear for small (sufficient for most FM modulator applications) voltage variations.

A rigorous mathematical explanation of this linear interdependence follows the empirical demonstration.

AN-211A Field-Effect Transistors in Theory and Practice

The basic theory, construction, and application information for field-effect transistors (junction and MOS types) are given. Also included are some typical test circuits for checking FET parameters.

AN-215A RF Small-Signal Design Using 2-Port Parameters

Power gain and stability of high-frequency transistors may be completely described by two port parameters.

This paper presents a summary of the overall design solution for the small-signal RF amplifier using two-port parameters. Design considerations and relationships for both the stable and the potentially unstable transistor are presented together with a discussion of neutralized, unneutralized, matched, and mismatched amplifiers.

AN-219 The Field-Effect Transistor in Digital Applications

Field-effect transistors have definite advantages over junction transistors in many digital applications; high fan-out, direct coupled circuitry (lower component count), extremely low power dissipation, and low temperature coefficient circuits are among the most important.

This paper provides the designer with an up-to-date discussion of JFET and MOSFET switching characteristics and how they are used in the design of basic digital circuits. The final portion of this paper discusses a family of JFET logic circuits, a family of MOSFET, and future prospects.

AN-220 FET's in Chopper and Analog Switching Circuits

The author's discussion begins with elementary chopper and analog switch characteristics—explores fully the considerations required for conventional and FET chopper and analog switch design—and finishes with specific FET circuit examples.

AN-221 4-Layer and Current-Limiter Diodes Reduce Circuit Cost and Complexity

The authors present four simple circuits in which 4-layer diodes and current-limiter diodes are used to provide increased circuit performance: A Saw-tooth generator (two variations), a staircase generator and a ring counter.

A brief discussion of the electrical characteristics of 4-layer and field-effect diodes precedes the circuit examples.

AN-222 The ABCs of Solid-State DC to AC Inverters

The author provides a comprehensive examination of the entire field of DC to AC inverters. Among the topics discussed are: the proper inverter for a specific application; operation principles of different types of inverters; the problem of proper device selection in the design of inverters; an inverter design example.

AN-226 Thermal Measurements on Semiconductors

This note describes the techniques used by Motorola to obtain the thermal resistance of transistors, rectifiers, and thyristors.

AN-238 Transistor Mixer Design Using 2-Port Parameters

Mixer circuit design may be simplified by the use of small-signal admittance parameters. This note describes in detail the effective application of this design technique and the corresponding results. Several design examples are discussed.

AN-240 SCR Power Control Fundamentals

Relationships of control angle to peak voltage, average voltage, RMS voltage and power are presented in chart form. Time constant for relaxation oscillators are discussed for both DC and AC supplies. These basics form the heart of SCR control.

AN-245A An Integrated Core Memory Sense Amplifier

This application note discusses core memories and related design considerations for a sense amplifier. Performance and environmental specifications for the amplifier design are carefully established so that the circuit will work with any computer using core memories. The final circuit design is then analyzed and measured performance is discussed. The amplifier features a small uncertainty region (6 mV max), adjustable voltage gain, and fast cycle time (0.5 μs).

AN-247A An Integrated Circuit RF-IF Amplifier

A new, versatile integrated circuit for RF-IF applications is introduced which offers high gain, extremely low internal feedback and wide AGC range. The circuit is a common-emitter, common-base pair (the cascade connection) with an AGC transistor and associated biasing circuitry. The amplifier is built on a very small die and is economically comparable to a single transistor, yet it offers performance advantages unobtainable with a single device. This application note describes the AC and DC operation of the circuit, a discussion of Y-parameters for calculating optimum power and voltage gain, and a variety of applications as an IF single-tuned amplifier, IF stagger-tuned amplifier, oscillator, video-audio amplifier and modulator. A discussion of noise figure is also included.

AN-248 The MC1533 Monolithic Operational Amplifier

This note introduces a high voltage monolithic operational amplifier featuring high open loop gain, large common mode input signal, and low drift. The function of each stage in the circuit is analyzed, and methods for frequency compensating the amplifier are discussed. DC biasing parameters are also examined. Four applications using the amplifier are discussed: a source follower, a twin tee filter and oscillator, a voltage regulator, and a high input impedance voltmeter.

AN-249 Designing Around the Tuning Diode Inductance

The effect of varactor inductance is described, and equations and graphs are presented in order to predict the inductance value and to determine when its effects on performance is significant.

In addition, a design example of a varactor-tuned capacity-loaded half-wave cavity from 470 MHz to 890 MHz, and derivations of design equations for varactor tuned quarter wave and half-wave cavities as well as for lumped series tuned circuits are shown.

AN-251A Decade Counters Using MRTL Integrated Circuits

This application note discusses the design and implementation of decade counters using the MRTL family of integrated logic. Ripple counters, shift counters, and parallel clocked counters are developed using BCD, 2'421, and excess 3 digital codes. Up and down counting techniques are discussed. Output decoding, problem areas and circuit limitations are covered for all counter types.

AN-261A Transistor Logarithmic Conversion Using an Operational Amplifier

The design of a log amplifier using a common base transistor configuration as the feedback element of an integrated circuit operational amplifier circuit is discussed in this application note. Six decades of logarithmic conversion are obtained with less than 1% error of output voltage. The possible causes of error are discussed followed by two applications: direct multiplication of two numbers, and solution of the equation $Z = X^n$.

AN-267 Matching Network Designs with Computer Solutions

Computer solutions for four networks commonly used in solid-state high frequency amplifiers have been tabulated.

AN-268 Pulse Triggering of Radar Modulator SCR's

Factors involved in dynamic gate triggering are examined and relations of gate triggering characteristics to variations of total current amplifications with gate current are shown.

AN-270 Nanosecond Pulse Handling Techniques In IC Interconnections

The rapid advancement in the field of high speed digital integrated circuits has brought into focus many problem areas in the methods of pulse measurement techniques and new concepts dealing with these problems. This paper is intended to discuss the more common, yet perhaps not well known, pitfalls of measurement systems, a method of detecting them and possible solutions.

AN-273A More Value out of Integrated Operational Amplifier Data Sheets

The operational amplifier is rapidly becoming a basic building block in present day solid state electronic systems. The purpose of this application note is to provide a better understanding of the open loop characteristics of the amplifier and their significance to overall circuit operation. Also, each parameter is defined and reviewed with respect to closed loop considerations. The importance of loop gain stability and bandwidth is discussed at length. Input offset circuits are also reviewed with respect to closed loop operation.

AN-282A Systemizing RF Power Amplifier Design

The design of high-power, Class C, RF transistor amplifiers can be greatly simplified through the use of large-signal device characterization. This note explains design procedures and furnishes large-signal impedance data for eight Motorola RF power transistors.

AN-290B Mounting Procedure for, and Thermal Aspects of, Thermopad Plastic Power Devices

Many Motorola power devices are now available in the Plastic Thermopad packages. Three package types are presently available. This application note provides information concerning the handling and mounting of these packages, as well as information on some thermal aspects.

AN-293 Theory and Characteristics of the Unijunction Transistor

This note discusses the theory of operation, the important characteristics and the behavior of the unijunction transistor under several operating conditions. In addition, a comparison is made between the different fabrication methods used to construct the UJT. Included is a table explaining UJT nomenclature.

AN-294 Unijunction Transistor Timers and Oscillators

Twelve different unijunction transistor circuits, complete with parts lists are given. Temperature stabilization of the peak-point voltage is examined and dynamic operation paths are discussed.

AN-295 Suppressing RFI in Thyristor Circuits

Measures taken to suppress RFI are shown. Design considerations and examples are explored as well as some solutions to the RFI problem.

AN-298 Noise Immunity with High Threshold Logic

A comparison of noise immunity characteristics is made between MHTL devices and standard saturated logic devices.

AN-299 An IC Wideband Video Amplifier with AGC

This application describes the use of the MC1550 as a wideband video amplifier with AGC. The analysis of a single stage amplifier with 28 dB of gain and 22 MHz bandwidth is given with the results extended to a 78 dB video amplifier with 10 MHz bandwidth.

AN-401 The MC1554 One-Watt Monolithic Integrated Circuit Power Amplifier

This application note discusses four different applications for the MC1554, along with a circuit description including DC characteristics, frequency response, and distortion. A section of the note is also devoted to package power dissipation calculations including the use of the curves on the power amplifier data sheet.

AN-403 Single Power Supply Operation of IC Op Amps

A split zener biasing technique that permits use of the MC1530/1531, MC1533, and MC1709 operational amplifiers and their restricted temperature counterparts MC1430/1431, MC1433 and MC1709C from a single power supply voltage is discussed in detail. General circuit considerations as well as specific AC and DC device considerations are outlined to minimize operating and design problems.

AN-404 A Wideband Monolithic Video Amplifier

This note describes the basic principles of AC and DC operation of the MC1552G and MC1553G, characteristics obtained as a function of the device operating modes, and typical circuit applications.

AN-407 A General Purpose IC Differential Output Operational Amplifier

This application note discusses four different applications for the MC1520 and a complete description of the device itself. The final sections of the note discuss such topics as operation from single and split power supplies, frequency compensation, and various feedback schemes.

AN-408 Problems and Solutions With MDTL and MRTL

Problems which may be encountered in using MRTL or MDTL integrated circuits in low or medium speed systems are examined in this report. Methods of shaping clock waveforms, restrictions on input and output terminals when interfacing with discrete components, and techniques for extending temperature range are discussed.

AN-411 The MC1535 Monolithic Dual Op Amp

This note discusses two dual operational amplifier applications and an input compensation scheme for fast slew rate for the MC1535. A complete AC and DC circuit analysis is presented in addition to many of the pertinent electrical characteristics and how they might affect the system performance.

AN-413 Unijunction Trigger Circuits for Gated Thyristors

This note describes the methods of supplying controlled pulse widths in synchronization with the AC power line to gated thyristors. The unijunction transistor provides a simple and convenient means of obtaining such pulses as well as including feedback with very little additional circuitry.

AN-414 Operation and Application of MHTL IC Flip-Flops

A master-slave R-S and a dual J-K are the initial flip-flop elements available in the Motorola High Threshold Logic (MHTL) family. This note describes operation and characteristics of each unit and illustrates several applications of these devices.

AN-415A Avoiding Second Breakdown

The use of safe-area data, the physical mechanism of second breakdown and applications to various circuits are presented. Also included is a short discussion of test procedures and a typical test circuit used to establish safe area curves.

AN-416 One-Step High Order Frequency Multipliers

The circuits described in this report include the use of lumped constants, coaxial cavities, and waveguides. The design of lumped constant, low order multipliers is discussed in Application Notes AN-147 and AN-151 and coaxial cavity multiplier design is treated in Note AN-159. Therefore, only a brief outline of the X2 and X3 multiplier circuits will be given.

AN-417A IC Crystal Controlled Oscillators

Crystal controlled square wave oscillators can be used as clock drivers, harmonic sources for frequency markers, in frequency synthesizers, frequency comparators, etc. It is difficult to obtain high frequency square waves due to the long propagation delays of the most integrated circuits. The MECL 10,000 circuits with 2 ns propagation delays eliminate this problem. This note describes square wave oscillator circuits with crystal control that are capable of output frequencies, inverted and non-inverted, up to 200 MHz.

AN-418 High Speed Monostable Multivibrator Design with MECL Integrated Circuits

This note describes two configurations of monostable multivibrators using the MC1023 clock driver and a delay element. Operating frequencies in excess of 70 MHz and pulse widths of 4 nanoseconds are possible. Methods of obtaining the predetermined delay are also discussed.

AN-419 UHF Amplifier Design Using Data Sheet Design Curves

This note describes the design of UHF narrowband amplifiers using the device loading admittances taken directly from the device data sheet. A design example is given in the form of a 1 GHz microstrip amplifier. Predicted results are compared to actual measured values. Also included is a short discussion on practical microstrip construction techniques.

AN-421 Semiconductor Noise Figure Considerations

A summary of many of the important noise figure considerations related with the design of low noise amplifiers is presented. The basic fundamentals involving noise, noise figure, and noise figure-frequency characteristics are then discussed with the emphasis on characteristics common to all semiconductors. A brief introduction is made to various methods of data sheet presentation of noise figure and a summary is given for the various methods of measurement. A discussion of low noise circuit design, utilizing many of the previously discussed considerations, is included.

AN-423 Field-Effect Transistor RF Amplifier Design Techniques

Amplifier design theory utilizing the two port network model for an active device has been well developed and used extensively in bipolar transistor high frequency amplifier design.

This paper discusses some of the theoretical and practical considerations for using this popular method to design field effect transistor amplifiers.

AN-426A Low-Power Audio Amplifiers Using Complementary Plastic Transistors

The use of complementary-symmetry output transistors in low-power audio amplifiers enables the circuit designer to achieve maximum circuit performance at minimum component cost. This note describes several audio amplifier circuits suitable for power outputs of up to 2 watts with 8-, 16- and 40-ohm loads. Also described is a line-operated single-ended audio amplifier suitable for table-radio or television applications.

AN-432B A Monolithic Integrated FM Stereo Decoder System

This application note discusses the circuit approach that has been taken in the realization of the first monolithic integrated stereo multiplex decoder built for consumer usage, as well as some of the details concerning its incorporation in an FM stereo receiver.

AN-436 Conventional and Soft-Start Dimming of Incandescent Lights

This note describes two dimmers that provide wide-range control of incandescent light intensity by adjusting the angle of conduction in a series triac. One dimmer features simplicity for small size and low cost, while the other offers soft-start operation to limit inrush current and lengthen lamp life.

AN-437B Design Considerations and Performance of Motorola Temperature-Compensated Zener Reference Diodes

This application note defines Motorola temperature-compensated zener (reference) diodes, explains the device characteristics, describes electrical testing, discusses the advanced concepts of device reliability and quality assurance, and outlines device construction.

AN-439 MC1539 Op Amp and its Applications

This application note discusses the MC1539, a second generation operational amplifier. The general use and operation of the amplifier is discussed with special mention made of improved operation over that of its first generation predecessor—the 709 type amplifier.

In addition to the detailed discussion on the DC and AC operation of the device, considerable emphasis is placed on operational performance. Many applications are offered to demonstrate the device capability, including a high frequency feed-forward scheme, and a source follower application.

AN-440 Theory and Characteristics of Phototransistors

A brief history of the photo-electric effect is discussed, followed by a compreshensive analysis of the effect in bulk semiconductors, pn junctions and phototransistors. A model is presented for the phototransistor. Static and transient data for the MRD300 provide typical phototransistor characteristics. Appendices provide a discussion of the relationship of irradiation and illumination and define terms specifically related to phototransistors.

AN-441 SCR Slaving Circuits

This circuit makes use of a low-cost transistor to overcome the limitations of a conventional R-C discharge circuit in slave firing of an SCR. It is especially useful where zero-point switching techniques are employed to control large electrical loads.

AN-442 Designing DC-DC Converters for Capacitor Charging with Batteries

This paper outlines design considerations for converters used for charging energy-stored capacitors with low-voltage batteries. The ratio of capacitor voltage to battery voltage is chosen to be greater than 100.

A discussion of converter characteristics is presented here from the standpoint of efficiency, frequency of oscillation, rate of energy transfer from battery to capacitor, and peak battery current drain.

A complete circuit is included that is tolerant of semiconductor parameter variations and is thus suitable for economical mass production.

AN-443 Directional and Speed Control for Series, Universal and Shunt Motors

A simple circuit containing few components allows control of both speed and direction of rotation of DC motors. The use of thyristors provides continuous driver control through the speed range without compromising the torque characteristics of the motors.

AN-445 Pulse-Width Modulation for DC-Motor Speed Control

Feedback derived from a motor's armature and dependent on its speed can be used to counteract the reduction in speed that accompanies loading. This note describes two speed-control circuits which use different methods to obtain the feedback signal. One method uses voltage sensing, and the other an optical pickup.

AN-447 Fast Charging Systems for Ni-Cd Batteries

This note discusses the requirements and problems encountered in designing fast charging systems for nickel-cadmium (Ni-Cd) cells, including some cell characteristics affected by high-rate charging.

AN-450 Induction Motor Speed Control

A method of providing speed control above and below design speed for an induction motor is shown in this note. Such speed control increases the versatility of an induction motor and permits it to be used in fulfilling requirements formerly satisfied only by DC motors.

AN-451 A Frequency Counter Using Motorola RTL Integrated Circuits

A frequency-period counter with a total hardware cost under $200.00, based on unit quantity prices, is described. The instrument measures the periods and frequencies of periodic waveforms, ranging in frequency from 10 Hz to 20 MHz, and counts random occurances for selected gate times of one millisecond to 10 seconds. A four digit decimal readout is provided. The low cost is achieved by utilizing plastic MRTL devices in unique versions of a crystal controlled oscillator, a period selector, a one shot multivibrator, a pulse shaper, and a switch contact bounce eliminator circuit.

AN-453 Zero Point Switching Techniques

This note discusses two unique pulse-type thyristor triggering circuits which meet the exact timing requirements of zero-point switching. They dissipate very little power and can be used with either sensitive or "shorted" gate devices.

AN-454 AC Overcurrent Protective Circuit with Automatic Reset

A unique circuit that will protect AC resistive loads from both overvoltage and overcurrent is shown. One feature of this circuit is that the sensing element is not in series with the load when the load is turned on.

AN-455 Using the FET Designers Data Sheet for Worst Case Amplifier Circuit Design

Basic information for the use of field-effect transistors is provided, and is an aid to complete understanding of the Designers Data Sheet. This report discusses the advantages, disadvantages, types and modes of operation of FETs and presents a definitive discussion of key parameters with their relationship to circuit design, when applicable.

AN-459 A Simple Technique for Extending Op Amp Power Bandwidth

The design of fast response amplifiers is presented without the use of "tricky" compensation procedures.

AN-460 Using Transient Response to Determine Operational Amplifier Stability

Analysis and an example are given for a technique that evaluates the stability of any particular feedback amplifier configuration by analyzing its response to a step-function input.

AN-461 Transient Suppression with a Power Zener Diode

This note discusses sources of voltage transients and their detection, and describes transient suppression using power zener diodes designed for this purpose.

AN-462 FET Current Regulators–Circuits and Diodes

Included are numerous FET current sourcing circuits, along with an extensive treatment of the current regulating diode and its uses as a valuable component in circuit design.

AN-464 MTTL Designer's Note–The MC4004/MC4005, A 16-Bit Random Access Memory

Pertinent information for the design of high speed, non-destructive readout (NDRO) memory systems using the MTTL 16-bit memory chip is given. The topics discussed are: (1) operation of the 16-bit memory including typical read and write sequences, (2) typical DC and switching characteristics as a function of temperature, power supply, and output load, and (3) examples of memory system organization utilizing the 16-bit memory as the basic cell.

AN-465 MTTL Designer's Note–The MC4006/MC4007 Decoders

Operation and expansion capabilities and examples of the system use of the MC4006 Binary to One-of-Eight Decoder and the MC4007 Dual Binary to One-of-Four Decoder are discussed.

AN-466 Circuit Applications for the Triac

This note discusses the basic theory of operation of the triac with control methods and circuit applications. Among the applications included are basic switches, lamp dimmers, motor controls, a heater control, a flasher, a regulator, protective circuits and zero-point switching.

AN-467 Using Motorola High Threshold Logic

This application note explains operation of the Motorola High Threshold Logic (MHTL) family of integrated circuits. It briefly describes the members of the family and provides many of the characteristics of the units. Several examples are provided to aid the reader in the application of this unique logic family.

AN-469 Line Operated 15-kHz Inverter

The circuit shown in this note is a line-operated inverter. It makes use of high-voltage, high-frequency silicon power transistors to provide 120 Volts and 200 Watts at 15 Kilohertz. Because of the high frequency of operation, the components used can be small in size, resulting in a very compact inverter.

AN-470 Bipolar Chopper Transistors and Circuits

Bipolar transistor chopper circuits are used in many applications for low-drift amplification of DC and low-frequency AC signals. This note discusses the characteristics of transistors used as choppers and the circuits in which they can be used.

AN-471 Analog-to-Digital Conversion Techniques

The subject of analog-to-digital conversion and many of the techniques that can be used to accomplish it are discussed. The paper is written in general terms from a system point of view and is intended to assist the reader in determining which conversion technique is best suited for a given application.

AN-472 Mounting and Heat Sinking Uniwatt Plastic Transistors

The Uniwatt plastic package is now being used for several medium-power transistor types. This note describes several methods for mounting such devices, with emphasis on proper heat sinking for best thermal characteristics.

AN-473 A Monolithic High-Power Series Voltage Regulator

This note discusses MC1560/MC1561 voltage regulator in terms of internal operation, development of these circuits, and how they are advantageously used in supply fabrication.

AN-474 The MC1541—A Gated Dual-Channel Sense Amplifier for Core Memories

The MC1541 sense amplifier can provide many magnetic core memory systems with lower system cycle times and a lower package count than with previous sense amplifiers. Circuit operation, design considerations, interface problems and typical applications are discussed.

AN-475 Using the MC1545—A Monolithic, Gated-Video Amplifier

Because of the unique design of the MC1545, this amplifier can be used as a gated video amplifier, sense amplifier, amplitude modulator, frequency shift keyer, balanced modulator, pulse amplifier, and many other applications. This note describes the AC and DC operation of the circuit and presents applications of the device as a video switch, amplitude modulator, balanced modulator, pulse amplifier, and others.

AN-476 MTTL Designer's Note—The MC4000 Data Selector and the MC4002 Data Distributor

Two MTTL complex functions, the MC4002 four and two-channel data distributor, and the MC4000 dual four-channel data selector are discussed. Their basic modes of operation and expansion capabilities are described. Examples of the use of the data distributor and the data selector in various systems are presented.

AN-478A Small-Signal RF Design with Dual-Gate MOSFETS

The dual-gate MOSFET offers low noise, high gain, and excellent AGC, cross-modulation and overload characteristics in RF applications. Recent devices also feature silicon nitride passivation for ease of handling and reliability. This note discusses the characteristics of dual-gate MOSFETs, with emphasis on designing circuits, noise figure, AGC, bandwidth and detuning, cross-modulation and mixer operation.

AN-480 Regulators Using Operational Amplifiers

The theory of op amp voltage regulator design is discussed. The problem areas associated with such designs are also detailed. The MC1560 is used as a OTC voltage reference in the op amp regulator designs that are shown. It is shown that regulation from 0.01% to 0.001% is possible.

AN-481 A Broadband 4-Watt Aircraft Transmitter

This report describes a 4-Watt wideband AM aircraft transmitter intended for light aircraft. The frequency range is 118 to 136 MHz and no tuning is required when changing frequency. The RF circuitry can be operated from 12.5 Volts, or can be used with a series modulator described in the note from 26 Volts.

AN-482 Electronic Speed Control of Appliance Motors

This application note discusses the possibilities of controlling several types of induction motors, universal motors and permanent-magnet motors, and includes circuit designs for each. By matching the motor to its electronic control, the designer can obtain a simple and efficient system.

AN-483B 20 and 30 Watt Power Amplifiers Using Darlington Output Transistors

Use of monolithic power Darlington output transistors can greatly simplify the design of high-fidelity amplifiers. Described herein is a 20-Watt amplifier which uses only three transistors, and a 30-Watt amplifier which uses four.

AN-484A Medium-Power Audio Amplifiers

This note describes a basic circuit design approach for audio complementary power amplifiers. Procedures are detailed for the selection of input, driver and output transistors. Both simple and Darlington transistor systems are included. Biasing, thermal considerations, overload protection and power supply information is given extensive treatment.

Design examples, including all circuit values, performance data and suggested P.C. board layouts, are given for simple transistor amplifiers at the 3, 5, 7, 10, 15, 20, 25, and 35 Watt levels. Also included are three amplifiers using Darlington output transistors at the 15, 20, and 25 Watt levels.

AN-485 High-Power Audio Amplifiers with Short-Circuit Protection

This application note describes a recommended circuit approach for high-performance audio amplifiers in the 35-Watt to 100-Watt RMS power range. Circuitry is included which enables the amplifier to operate safely continuously under any load condition including a short.

AN-487 A High-Speed Ripple-Through Arithmetic Processor

A simple, systematic building block approach for designing a high-speed, ripple-through arithmetic processor is described. Using only gates and full adders, ultra-high speed multiplication, division, square root extraction, addition, and subtraction may be performed. Several variations of an arithmetic processor design are detailed and comparisons of speed and package count using the MECL and MDTL logic in 14-pin, 16-pin, 24-pin, 32-pin, and 64-pin packages are given.

AN-488 High-Speed Addition Using Lookahead Carry Techniques

The use of the lookahead carry principle to increase the operating speed of adder systems is described. Several adders of different sizes using variations of lookahead carry are developed and the logical implementation of these using the MTTL III and MECL II and III logic families is given.

AN-489 Analysis and Basic Operation of the MC1595

The MC1595 monolithic linear four-quadrant multiplier is discussed. The equations for the analysis are given along with performance that is characteristic of the device. A few basic applications are given to assist the designer in system design.

AN-491 Gated Video Amplifier Applications The MC1545

This application note reviews the basic operation of the MC1545 and discusses some of the more popular applications for the MC1545. Included are several modulator types, temperature compensation of the active gate, AGC, gated oscillators, FSK systems, and single supply operation.

AN-493 The MC3000/MC3100 Series Transistor-Transistor Logic Flip-Flops

This application note explains the basic operation of the various flip-flops available in the MC3000/MC3100 series of transistor-transistor logic from Motorola. Typical operating characteristics are included so that operation under different conditions can be determined.

AN-496A Error Detection and Correction Using Exclusive-OR Gates and Parity Trees

The availability of Exclusive OR gates and parity trees allows digital system designers to use error detection and correction codes to improve their system reliability and maintainability without the major cost penalty that has existed in the past. Use of Exclusive-OR gates and parity trees available in the MRTL, MTTL, MDTL, and MECL families to design simple parity and single error Hamming parity detection and correction circuits is discussed.

AN-498 Voltage and Current Boost Techniques Using The MC1560-61

The stability requirements for the current boosted MC1560-61 are discussed. Both internal and external compensation techniques are shown, along with heat-sink design information and typical circuits, including a self-oscillating switching regulator, and a voltage boost circuit.

AN-499 Shutdown Techniques for the MC1560-61/69 Monolithic Voltage Regulators

This note discusses the many ways one can use the shutdown control for the MC1560 Monolithic Voltage Regulator. These include logic control, short circuit detection, over voltage detection, junction temperature control, and thermal feedback. Also discussed, are current foldback and methods of restarting automatically from the shutdown state. The techniques discussed apply equally to the MC1560, MC1561, and MC1569 positive voltage regulators.

AN-500 Development, Analysis, and Basic Operation of the MC1560-61 Monolithic Voltage Regulators

In this note, the anlysis and basic operation of the MC1560 and the MC1561 voltage regulators are discussed. The tests and parameters used on the data sheet are considered, and the problems of specifying a monolithic voltage regulator are identified. The basic circuit configurations are shown with some insight for the typical performance one can expect.

AN-504 The MC1600 Series MECL III Gates

This application note explains the basic operation of the various gates available in the MECL III logic family. Typical operating characteristics are included as an aid to the designer of high-speed logic along with recommended layout, breadboarding, and testing procedures. This note will also provide the designer with some insight into the overall capabilities of this logic line as they apply to this application.

AN-505 The MC4012, A MTTL 4-Bit Shift Register

The MC4012 is a 4-bit shift register consisting of four D-type flip-flops operated in the synchronous mode and may be used for temporary storage of information. The MC4012 may be operated in either the parallel or serial mode input depending upon the logic state of the mode control. Circuit operation and various applications of the device are the subject of this application note.

AN-506 Code Conversion with Semiconductor Read Only Memories

In digital systems, data is manipulated and transmitted in coded form and frequently must be translated from one code into another. The use of ready only memories to perform the various code conversions is discussed in this note. In particular, methods for converting data from the binary code to the binary coded decimal representation, and vice versa, are detailed. Conversion from the Hollerith code to the common 8-bit codes, such as the RS-358, ASC II, and EBCDIC codes, as well as conversions between the 8-bit codes are also treated.

AN-507 A 13-Watt Broadband AM Aircraft Transmitter

This report describes a wideband AM aircraft transmitter with a typical carrier output level of 13 Watts. The frequency range is 118 to 136 MHz with no tuning required. The supply voltage for the transmitter is 13.6 Volts. A transformerless series modulator is also described, and with this system, a 27.2-Volt supply is required. Lower-power 2.5 and 7-Watt transmitters are also included.

AN-508 Applications of Phototransistors in Electro-Optic Systems

This note reviews phototransistor theory, characteristics and terminology, then discusses the design of electro-optic systems using device information and geometric considerations. It also includes several circuit designs that are suited to DC, low-frequency and high-frequency applications.

AN-509 True RMS Voltage Regulators

This note describes AC voltage regulators that are ideal for use with electronic and electrical equipment such as lamps and heaters that are highly sensitive to supply voltage. These regulators maintain constant RMS voltage levels for input or load changes.

AN-511 Low Frequency Applications of Field-Effect Transistors

Field-effect transistors enjoy usage in a wide range of applications at both high and low frequencies. This report discusses the low-frequency applications, with an emphasis on the lesser-known uses. General topics covered are switches and choppers, amplifiers, voltage-variable resistors, current limiters, and microwatt logic.

AN-512 Applications of Fast-Recovery Recitifiers

Many applications that use silicon rectifiers at high frequencies or repetition rates can be improved with fast-recovery diodes. This note discusses the characteristics of these diodes and describes typical applications in which they excel.

AN-513 A High Gain Integrated Circuit RF-IF Amplifier with Wide Range AGC

This note describes the operation and application of the MC1590G, a monolithic RF-IF amplifier. Included are several applications for IF amplifiers, a mixer, video amplifiers, single and two-stage RF amplifiers.

AN-517 Improving the Efficiency of Low-Voltage, High-Current Rectification

The efficiency of low-voltage, high-current rectification can be improved by using either barrier rectifier diodes or synchronous rectification. This note discusses both approaches and compares them to the use of conventional silicon rectifiers.

AN-518 Constant-Speed Motor Control Using Tachometer Feedback

A simple tachometer can provide feedback control for shaded-pole motors and better brush life for universal motors. This note describes pickups and circuits suitable for use in such equipment as home appliances and power tools.

AN-519 Using MDTL Logic Blocks

This application note discusses typical applications of basic MDTL components such as gates and flip-flops, with emphasis placed on the positive logic AND, OR, NOR, NAND, and Exclusive-OR functions. Methods of interfacing MDTL with other popular logic families are also discussed.

AN-521 Using Balanced Emitter Transistors in RF Applications

Motorola Balanced Emitter Transistors provide excellent performance and resistance to burnout under conditions of mismatching and detuning in high-frequency power amplifiers. This note describes the characteristics and typical applications of these transistors.

AN-522 The MC1556 Operational Amplifier and its Applications

This application note discusses the MC1556, a second generation, internally compensated monolithic operational amplifier. Particular emphasis is placed on its distinct advantages over the early 709-type amplifier and the more recent 741-type amplifier.

Along with a description of its operation this note presents a discussion on various applications of the MC1556, highlighting its capabilities, and points out its characteristics so the reader may make effective use of the device.

AN-524 Converting Relay Control Systems to Digital ICs

Basic Boolean Algebra and logic functions are defined and discussed. A method of converting relay diagrams to logic diagrams is then presented. Several examples and a system design illustrate the conversion method using MHTL.

AN-526 Theory, Characteristics and Applications of Silicon Unilateral and Bilateral Switches

The SUS/SBS are constructed as simple integrated circuits which perform as gated or voltage sensitive switches. Device theory and operation are explained plus circuit applications in the areas of power thyristor triggering and logic. Devices illustrated include the MUS4987-88 and the MBS4991-92.

AN-527 Theory, Characteristics and Applications of the Programmable Unijunction Transistor

This note discusses the characteristics of a programmable unijunction transistor (PUT) and offers comparisons with the Annular unijunction. Also included are several circuits showing the versatility of the PUT.

AN-529 Regulated Line Operated Inverter Uses High Voltage Power Transistors and Hot Carrier Rectifiers

This report describes a line operated 225 Watt preregulated power supply which offers considerable reductions in overall size and weight as compared to more conventional techniques of obtaining low voltages at high currents.

AN-530A The MC7491A Eight-Bit Serial Shift Register and the MC7495 Four-Bit Shift Register

Operation of the MC5491A/7491A 8-bit shift register and the MC5495/7495 4-bit universal shift register is discussed. Typical applications are covered for each device and use of the two devices in a data transmission system is illustrated.

AN-531 MC1596 Balanced Modulator

The MC1596 monolithic circuit is a highly versatile communications building block. In this note, both theoretical and practical information are given to aid the designer in the use of this part. Applications include modulators for AM, SSB, and suppressed carrier AM; demodulators for the previously mentioned modulation forms; frequency doublers and HF/VHF double balanced mixers.

AN-532A MTTL and MECL Avionics Digital Frequency Synthesizer

This application note discusses several approaches that illustrate applications of complex digital integrated circuits directed toward avionics frequency synthesizers. The techniques presented point out the simplicity with which both MTTL and MECL digital integrated circuits can be used to produce frequency synthesis for avionic communications.

AN-533 Semiconductors for Plated-Wire Memories

An introduction to the operation and electrical characteristics of plated-wire memories is provided in conjunction with the applications of semiconductors that interface with the plated-wire memories.

Devices discussed include drivers, sense amplifiers, and decoders. Memory organization and memory-related semiconductor applications are also mentioned.

AN-534 Commutating Filter Techniques

This note describes the design and construction of commutating (digital) filters using Motorola MECL II, MTTL III and MC7400 digital integrated circuits. A short section on commutating filter theory is included along with examples of filters and their responses.

AN-535 Phase-Locked Loop Design Fundamentals

The fundamental design concepts for phase-locked loops implemented with integrated circuits are outlined. The necessary equations required to evaluate the basic loop performance are given in conjunction with a brief design example.

AN-536 Micro-T Packaged Transistors for High Speed Logic Systems

Integrated circuits have become the first thought of most designers faced with a digital problem. For specialized needs such as extremely high speed, high speed with minimum power dissipation, or unusual logic functions, however, discrete transistors in the ultra-small Micro-T package may prove advantageous.

AN-538A Motorola Complementary MOS Integrated Circuits

This note discusses some of the properties of N-channel and P-channel MOSFETs and describes how they are used to construct complementary MOS integrated circuits. Some basic McMOS logic functions are then discussed and methods of cascading McMOS counters are given.

AN-540 A Synchronously Gated N-Decade Sweep Oscillator

This report describes a unique solid-state sweep oscillator system which hypothetically can be swept over any frequency range. The prototype discussed herein is swept over only five decades. Options are provided to preselect any one, two or five frequency decades between 10 Hz and 10 MHz, whether sequential or not.

AN-541 Medium Scale Integration in the Numerical Control Field

Since medium scale integration means complex functions, the logic design engineer must understand both the product and its end use in order that his design be optimized. Transistor-Transistor Logic has a number of devices such as programmable counters, phase detectors, voltage controlled multivibrators, comparators, etc., which are available today in integrated circuit form. The devices can be applied to the numerical controls field and are the subject of this paper.

AN-543 Integrated Circuit IF Amplifiers for AM/FM and FM Radios

This application note discusses the design and performance of four IF amplifiers using integrated circuits. The IF amplifiers discussed include a high performance circuit, a circuit utilizing a quadrature detector, a composite AM/FM circuit, and an economy model for use with an external discriminator.

AN-544A Printed Circuit VHF TV Tuners Using Tuning Diodes

Two printed circuit VHF varactor tuners were designed and built in the Motorola Applications Laboratory. Both designs were centered around tuning diodes, PIN band switching diodes, the dual-gate MOSFET, and a cascode mixer. One tuner uses a high capacitance tuning diode while the other uses a low capacitance device. This note describes the tuners, the design procedures, and the tuner performance.

AN-545 Television Video IF Amplifier Using Integrated Circuits

This applications note considers the requirements of the video IF amplifier section of a television receiver, and gives working circuit schematics using integrated circuits which have been specifically designed for consumer oriented products. The integrated circuits used are the MC1350, MC1352, MC1353 and the MC1330.

AN-546 Solid-State Linear Power Amplifier Design

Linear amplifier design techniques and new RF power transistors developed specifically for HF (2-30 MHz) linear amplifier service are discussed.

AN-547 A High-Speed Dual Differential Comparator, The MC1514

This application note discusses a few of the many uses for the MC1514 dual comparator. Many applications such as sense amplifiers, multivibrators, and peak level detectors are presented.

AN-548A Microstrip Design Techniques for UHF Amplifiers

The design and construction of a 25-Watt UHF power amplifier utilizing microstrip techniques for the 450 to 512 MHz band is discussed. The amplifier utilizes the 2N5945, 2N5946 and 2N6136 RF power transistors.

AN-549 A Vertical Deflection Circuit Using Complementary Transistors

A vertical deflection system for television sets is discussed which uses complementary transistors in the output stage to avoid the need for an output transformer. This system consists of two separate circuits—an oscillator and a power amplifier—either of which can be used separately or as part of a different system. The oscillator produces a sawtooth voltage waveform. The power amplifier converts a sawtooth voltage waveform into a sawtooth current waveform to drive the scan coils.

AN-550 Programming the MCM5003/5004 Programmable Read Only Memory

This note describes programming methods for the MCM5003/5004 512-bit (64x8) TTL Programmable Read Only Memory (PROM). These program methods can result in short design cycles for custom ROM circuits. Operation and circuit details of the MCM5003/5004 are given first. Then programming methods and circuitry are discussed. The simplest programmer uses only five ICs, while a more sophisticated programmer, using automatic sequencing, requires a total of 25 ICs.

AN-551 Tuning Diode Design Techniques

Epicap tuning diodes offer many advantages over air variable capacitors. However is some applications their capacitance drift with temperature changes must be overcome with suitable compensation techniques. This note discusses a number of considerations to be employed in designs using tuning diodes.

AN-552 The Control Engineer's Guide to IC Applications

This report is a guide to the use of integrated circuits, and as such provides practical solutions to a number of common problems encountered in circuits used for sensing and control which must operate in an industrial environment. The report is divided into two parts—digital ICs and linear ICs.

AN-553 A New Generation of Integrated Avionic Synthesizers

The need to generate signals of a multitude of different frequencies for avionic systems has resulted in complex solutions in the past. With the introduction of certain standard product integrated circuits, frequency synthesis using digital phase locked loop techniques presents a more practical solution. Several different types of servo phase locked loop systems are discussed and a practical design example is given. Results of design examples are presented along with possible applications.

AN-555 Mounting Stripline-Opposed-Emitter (SOE) Transistors

The basic construction of the Stripline-Opposed-Emitter package used for many RF power transistors is described. Methods of mounting and heat-sinking both stud and flange type packages which allow best utilization of the transistor's dynamic and thermal properties are discussed. These mounting methods prevent the possibility of device damage due to improper mounting techniques.

AN-556 Interconnection Techniques for Motorola's MECL 10,000 Series Emitter Coupled Logic

This application note describes some of the characteristics of high speed digital signal lines and gives wiring rules for MECL 10,000 emitter coupled logic. The note includes discussions of printed circuit board interconnects, board-to-board interconnects, and wirewrapping techniques.

AN-557 Analog-to-Digital Cyclic Converter

The A/D cyclic converter discussed in this note provides medium speed (1-5μs/ bit) and medium accuracy (7 or 8 bits) operation. A Cyclic converter uses the successive approximation technique in which an unknown analog input voltage is successively compared to a reference voltage to determine each bit of the digital output.

The cyclic converter offers continuous operation, automatic generation of the digital output in Gray-code form, and a building block structure. This structure uses a separate but identical circuit for each resolution bit. The cyclic converter finds use primarily in control and process applications.

AN-559 Simple RAMP A/D Converter

A simple single ramp A/D converter which incorporates a calibration cycle to insure an accuracy of 12 bits is discussed. The circuit uses standard ICs and requires only one precision part—the reference voltage used in the calibration. This converter is useful in a number of instrumentation and measurement applications.

AN-560 Designing Tuned Lines for UHF TV Tuners

Transmission line equations have been used to obtain graphs which show the relationships between line length, tuning capacitance ratio, characteristic resistance and capacitance magnitude in the 473 MHz to 887 MHz range. Graphs are also included for oscillator tuned line design—517 MHz to 931 MHz.

AN-561 How to Use Photosensors and Light Sources

Practical methods are given for the design of light-sensing circuits using both semiconductors and incandescent light sources. A discussion on measuring light sources is also included.

AN-563 Hybrid Gain Modules for Use in CATV Trunk and Line Extender Amplifiers

This report describes three hybrid gain modules intended for CATV trunk line and line extender amplifiers. These modules are designed to operate from a +24 Vdc power supply and cover the 40—300 MHz frequency range.

AN-564 An ADF Frequency Synthesizer Utilizing Phase Locked-Loop Integrated Circuits

This application note describes an IC phase locked-loop frequency synthesizer suitable for the local osciallator function in aircraft Automatic Direction Finder (ADF) equipment.

AN-565 Using Shift Registers as Pulse Delay Networks

This note discusses a high-speed clocked shift register using MECL 10,000 flip-flops and employed as a digital incremental delay. The register may be clocked with a frequency division counter to accomplish delay with increments as small as 7.5 ns. The circuit, as developed, may be used for timing basic computer decisions or as an adjustable digital delay line for pulses.

AN-566 High Speed Binary Multiplication Using the MC10181

With a MECL 4-bit arithmetic unit you can reduce both package count and interconnections in a ripple multiplier and achieve very fast multiply times.

AN-567 MECL Positive and Negative Logic

Eight positive or negative logic assignments may prove convenient to the MECL system designer. This note describes the equivalences between the two approaches and provides guides for converting between them.

AN-568 A Fuse-Thyristor Coordination Primer

This report treats the considerations required for the use of fuses in protecting thyristors against short circuit fault currents. Basics of the mating philosophy are discussed and practical examples of coordination are given. Symbols, terms and their definitions are included.

AN-569 Transient Thermal Resistance–General Data and Its Use

Data illustrating the thermal response of a number of semiconductor die and package combinations are given. Its use, employing the concepts of transient thermal resistance and superposition, permit the circuit designer to predict semiconductor junction temperature at any point in time during application of a complex power pulse train.

AN-571 Isolation Techniques Using Optical Couplers

The material presented gives the basic considerations needed for using optical couplers. Although limited in example to the MOC1000 coupler, the information applies to other optical couplers where gallium arsenide diodes and silicon detectors are used.

AN-574 CMOS: A New Logic Type For Control Systems

Designing circuits that operate properly in high noise environments such as those commonly found in an industrial plant is often the bane of the control systems designer. CMOS circuits offer high noise immunity, plus the additional benefits of operation over a broad range of power supply levels and very low power dissipation. This article compares CMOS to other logic types and then describes how to interface it to them.

AN-575A Variable Speed Control System for Induction Motors

This report describes a method of controlling the speed of standard induction motors above and below their rated speeds. A unique variable frequency drive system is used to maintain the rated output torque at speeds below the nameplate rating.

AN-576 The Logical Design of Shift Counters

Two techniques are presented that aid in the design of shift-register counters. Results for "sequence tree" and "count multiplication" techniques for cycle lengths of 30 or less are given. Solutions for both "D" flip-flop and J-K flip-flop as input elements of the shift register are shown.

AN-577 Design Techniques for an 80 Watt, 175 MHz Transmitter for 12.5 Volt Operation

This report describes the design of a four stage power amplifier capable of providing 80 Watts continuous power output at 175 MHz when operating from a 12.5 Volt supply. Techniques for operating two devices in parallel for the output stage are presented. Performance data, high load VSWR information, and thermal design considerations are also included.

AN-578 UHF Microstrip Amplifiers Utilizing G-10 Epoxy-Glass Laminate

This note discusses the use of G-10 epoxy-glass laminate as a microstrip substrate. Two UHF power amplifiers are designed and used to evaluate the overall performance of the laminate.

AN-579 Testing MECL 10,000 Integrated Logic Circuits

Circuit testing techniques become increasingly important as circuit speeds appraoch and exceed the 2 ns range. With MECL 10,000 and MECL III circuits it is possible to exploit their 50-Ohm output drive capability to obtain highly accurate test data. This application note describes techniques for testing MECL 10,000 circuits for laboratory evaluation, and discusses key parameters which should be measured during incoming inspection rapid testing.

AN-580 Thermal Runaway in High Power Thyristors

The temperature dependence of reverse biased junction current may cause thermal runaway if an adequate heat dissipator is not used. Dissipator thermal resistance can be found from the presented curves. The mathematical derivation of the design equations based upon semiconductor theory is given and its examples illustrate use of the curves.

AN-581 An MSI 500-MHz Frequency Counter Using MECL and MTTL

The design of a MSI 8-digit LED readout 500 MHz counter using MECL III, MECL 10,000 and TTL is discussed. Described are two prescalers using MECL, along with the designs for two input amplifiers. A unique time-base controller is also shown for providing a multiphase clock to the counter.

AN-583 A MECL 10,000 Main Frame Memory System Employing Dynamic MOS RAMS

This application note describes the construction of a dynamic MOS random access memory system that employs MECL 10,000 for the memory control logic. Considered in detail are the memory organization, layout rules, interfacing, and generation of the needed control signals.

AN-584 Programmable Counters Using the MC10136 and MC10137 MECL 10,000 Universal Counters

This application note describes operation of two MECL 10,000 universal counters and their use in high speed programmable counters. Circuit diagrams and waveform traces are included.

AN-585 VHF Power Amplifiers Using Paralleled Output Transistors

This report provides schematic diagrams, test results and construction information for two 80 Watt amplifiers designed for 12.5 Volt operation. These amplifiers are suitable for use as power amplifier stages in new VHF, FM transmitter designs and as ADD-ON outboard amplifiers to boost the power of existing transmitters. Detailed design procedures for similar amplifiers are given in AN-577.

AN-586 Measure Frequency and Propagation Delay with High Speed MECL Circuits

This application note describes an ECL frequency counter useful to 160 MHz, along with a propagation delay measuring circuit capable of 100 picosecond resolution.

AN-587 Analysis and Design of the Op Amp Current Source

A voltage controlled current source utilizing an operational amplifier is discussed. Expressions for the transfer function and output impedances are developed using both the ideal and non-ideal op amp models. A section on analysis of the effects of op amp parameters and temperature variations on circuit performance is presented.

AN-588 A 20 kHz, 1kW Line Operated Inverter

This report describes a 1 kilowatt ultrasonic inverter for use in 208-volt, line-operated, computer main-frame power supply systems. This particular design has an output capability of 5 Volts at 200 Amperes.

AN-589 Generate Custom Waveforms Digitally

A method of generating custom waveforms using IC counters, a read-only memory, and a new monolithic D/A Converter is described. Performance of a prototype model is noted as well as possible applications.

AN-590 Servo Motor Drive Amplifiers

The design of transformerless, AC servo amplifiers using power darlington transistors and IC op amps are discussed. Two types of power amplifiers are illustrated, one using single +28 Volt power supply, the second using high voltage transistors in complementary configuration for operating directly off the line.

Four different op amp preamplifiers and 90 phase shifters are also described.

AN-591 Using McMOS in System Designs – Those All-Important Details

While much of the available literature has focused on introducing the CMOS technology and describing its potential, this discussion proceeds one step further and explores how to use CMOS devices most efficiently. There are important interrelationships behind the device features and performance specs, the parameter sensitivities and the operating subtleties, which are sometimes ignored. The correct approach to CMOS design, wherein such interrelationships are taken into account, can do a great deal to optimize a system design.

AN-592 AC Noise Immunity of MECL 10,000 Integrated Circuits

This application note discusses AC noise immunity as it relates to MECL systems. Test circuits for measuring AC noise immunity are shown, and results to be expected for typical MECL 10,000 circuits are presented.

AN-593 Broadband Linear Power Amplifiers Using Push-Pull Transistors

Two solid-state linear power amplifiers are discussed. One provides 160 Watts while operating from a 28 Volt supply and the other provides 80 Watts from a 12.5 Volt supply. Both utilize push-pull output configuration for low harmonic distortion and transmission-line type transformers for broadband coupling.

AN-594 A Frequency Synthesizer for Aircraft Automatic Direction Finding Systems

This report describes a phase locked loop frequency synthesizer suitable as the local oscillator in an ADF system. The synthesizer is designed for receivers using a 455 kHz IF system. Motorola application note AN-564 describes a similar system for receivers using a 10.7 MHz IF.

AN-595 25-Watt and 10-Watt VHF Marine Band Transmitters

Design, performance and construction information are provided in this report for two power amplifiers suitable for VHF marine band (156-162 MHz) applications. Rated power output levels are 25 watts and 10 watts. Methods of meeting the FCC low power output (one watt or less) requirement are discussed in detail. Both amplifiers can be tuned to cover 144-175 MHz and performance data is provided for this frequency range.

AN-596 A Class D Citizen's Band Transmitter Using Low-Cost Plastic Transistors

This note describes the design and construction of an economical class D Citizens Band transmitter. The transmitter features a novel high-level collector modulation method using two diodes. A double-pi output matching network is employed for good harmonic suppression.

AN-597 Power Control Using the Zero Voltage Switch

This application note discusses the advantages of zero-voltage switching using the Motorola MFC8070. A temperature control circuit is shown which demonstrates the design flexibility of CMOS and optical-coupler combinations.

AN-598A Four Terminal, Optically Isolated Zero Crossing AC Relay

This application describes a solid state relay for ac control. The output is isolated from the input by means of photon coupling. To minimize EMI, relay actuation is permitted only during the zero voltage crossing of the ac line.

AN-599 Mounting Techniques for Metal Packaged Power Semiconductors

For cooler, more reliable operation, proper mounting procedures must be followed if the interface thermal resistance between the semiconductor package and heat sink is to be minimized. Discussed are aspects of preparing the mounting surface, using thermal compounds, and fastening techniques. Typical interface thermal resistance is given for a number of packages.

AN-700 Simulate MECL System Interconnections With A Computer Program

Circuit interconnections are an important part of system design when using high speed logic circuits. The design of interconnecting paths affects both system speed and system accuracy. This application note describes the use of a computer program to simulate interconnections for high speed digital systems.

AN-701 Understanding MECL 10,000 DC and AC Data Sheet Specifications

The dc and ac specifications for emitter-coupled logic are somewhat different than those for saturated logic. This application note describes the specifications found on a MECL 10,000 data sheet and provides information for understanding these specifications for persons unfamiliar with emitter-coupled logic.

AN-702 High Speed Digital-To-Analog and Analog-To-Digital Techniques

A brief overview of some of the more popular techniques for accomplishing D/A and A/D techniques. In particular those techniques which lead themselves to high speed conversion.

AN-703 Designing Digitally-Controlled Power Supplies

This application note shows two design approaches; a basic low voltage supply using an inexpensive MC1723 voltage regulator and a high current, high voltage, supply using the MC1466 floating regulator with optoelectronic isolation. Various circuit options are shown to allow the designer maximum flexibility in an application.

AN-704 Broadband Network Design for UHF Amplifiers

A practical method to synthesize bread-board matching networks for UHF power amplifier using only a set of filter design tables and a standard smith chart is developed. The amplifiers used as illustrative vehicles utilize two of Motorola's new line of "Controlled Q" RF power transistors, the MRF618 and the MRF620.

AN-705 Pulse Width Modulation for Small DC Motor Control

This application note explains the use of modern pulse width modulation techniques as an efficient and economical solution to small DC motor control. Several practical circuit design approaches using discrete, operational amplifier and integrated circuit devices are described and illustrated.

AN-706 A CRT Display System Using NMOS Memories

New NMOS Memory devices used for both storage and character generation are demonstrated in a typical CRT display system. The 128-character system design features full TTL compatibility of the NMOS memories and design simplicity.

AN-707 Noise Immunity Comparison of CMOS Versus Popular Bipolar Logic Families

This application note compares the noise immunities of the four major logic families used today in industrial logic systems designs: TTL, DTL, HTL, and CMOS. Also included are general discussions of common noise sources, precautions against noise, noise specifications, and standard noise tests.

AN-708 Line Driver and Receiver Considerations

This report discusses many line driver and receiver design considerations such as system description, definition of terms, important parameter measurements, design procedures and application examples. An extensive line of devices is available from Motorola to provide the designer with the tools to implement the data transmission requirements necessary for almost every type of transmission system.

AN-709 MECL 10,000 Arithmetic Elements MC10179, MC10180, MC10181

The MECL 10,000 arithmetic functions include a 4-bit arithmetic unit, a dual adder/substractor, and a lookahead carry block. This application note describes the devices and shows their operation in large system configurations.

AN-710 Communication System Transmission Losses

This report shows the derivation of the equations used to calculate the insertion loss associated with various component parts of a communications channel. The combinations of components form a system whose overall loss may not be equal to the sum of the losses of the various parts.

AN-711 The Recovery of Recorded Digital Information in Drum, Disk and Tape Systems

The use of magnetic recording techniques has long been an important means of sorting digital information, as evidenced by the wide variety of equipment currently in use. Representative systems utilize drums, disks and tape as the recording medium.

All three techniques share the common problem of recovering the recorded digital information. The analog signal obtained by passing the recording medium by a magnetic sensor (Read Head) must be converted to a suitable digital format.

This application note reviews the general problem and discusses a number of specific circuit approaches.

AN-712 Interface Techniques Between Industrial Logic and Power Devices

This application note presents worst case design approaches to illustrate the methods of interfacing McMOS and MHTL logic to various power load levels, both ac and dc. Interface devices vary from small-signal transistors to power transistors and thyristors, using direct coupling/level translation and optoelectronic coupling techniques.

AN-713 Binary D/A Converters can Provide BCD-Coded Conversion

This note describes the application and use of integrated circuit D/A converters for use in providing a BCD-coded conversion. The technique is illustrated using a 2-1/2 digit digital voltmeter.

AN-714 A Personalized Heart-Rate Monitor with Digital Readout

Using the micropower operational amplifier MC1776 and CMOS digital integrated circuits, entirely self-contained portable electro-medical monitoring equipment can be built. This note details the construction of a heart-rate monitor giving a digital indication, beat-by-beat.

AN-715 Introduction to CMOS IC's with 3-State Outputs

This note describes a wide variety of standard CMOS integrated circuits incorporating transmission gates with standard logic. Design rules and applications of these devices include the areas of analog switching and multiplexing, digital multiplexing, and data transmission.

AN-716 A/D Conversion Series – Part V Successive Approximation A/D Conversion

Recent advances in integrated circuit design and technology have resulted in reduced cost of high performance successive approximation analog to digital converters. This note describes and illustrates two examples of how modern IC components have changed this well known technique.

AN-717 Battery Powered 5-MHz Frequency Counter

This application note describes a battery-powered 5-MHz frequency counter using the McMOS logic family for low-power operation. The basic counter is optimized, at a 12-volt supply for maximum performance with a linear input-signal conditioner. Several options are discussed which optimize the basic counter for minimum power dissipation. These options include a CMOS input signal-conditioner and multiplexed LED displays.

AN-718A Industrial Clock/Timer Featuring Back-Up Power Supply Operation

This note describes the design and operation of a clock timer with digital readout for industrial control applications. The clock timer reference is a crystal controlled oscillator with low powered CMOS logic comprising the clock reference divider chain and digital portions. A battery powered back-up power supply is included to power the logic portion during power outages. To conserve battery power, digital displays are line powered during normal operation and are OFF during power failure. Digital comparators are used in the control section which is also designed to allow expansion for any size and type of device control.

AN-719 A New Approach to Switching Regulators

This article describes a 24-Volt, 3-Ampere switching mode supply. It operates at 20 kHz from a 120 Vac line with an overall efficiency of 70%. New techniques are used to shape the load line. The control portion uses a quad comparator and an opto coupler and features short circuit protection.

AN-720 Interfacing with MECL 10,000

This article describes some of the MECL circuits used to interface with signals not meeting MECL input or output requirements. The characteristics of these circuits such as; input impedance, output drive, gain, and bandwidth allow the system designer to use these parts to optimize his system. MECL interface circuits overcome a problem area of many system designs, which is the efficient coupling on non-compatible signals.

AN-721 Impedance Matching Networks Applied to RF Power Transistors
AN-312 (European)

This note covers the basics of interstage and output impedance matching of RF power transistors. Graphical and numerical methods of solution are clearly described, along with sample problems. Photos, schematics and charts are generously provided throughout.

***AN-722 Replacing Sequential Logic with ROMs**

As ROM sizes increase the cost per bit continues drop resulting in new uses for ROMs previously thought not practical or too costly. This note discusses how to use ROMs to replace random logic with feedback loops. The advantage of using ROMs is reduced package count and a more cost effective system. These design examples are given to show the implementation techniques involved in achieving a reliable design without pitfalls. The techniques shown will hopefully inspire others to use these techniques in present designs and to develop new innovative techniques for using ROMs.

AN-723 Measuring RF Spray Radiation from High Voltage Stick Rectifiers

Commonly used methods of assessing the amount of radiation from high voltage stick rectifiers are discussed. A test circuit which significantly improves the repeatability of this difficult measurement is proposed.

AN-724 Operational Aspects of Motorola's Data Terminal

The MC2257, MC2259, and MC2260 are special MOS SSI devices that perform various functions relating to the transmission of digital data information in data terminal applications. This application note provides an in depth discussion of the operation of these parts.

*Available Soon.

AN-725 A Low-Cost 80 V-1.5 A Color TV Power Supply

A full-wave SCR power supply is proposed for application in line operated color television receivers. Economy of design is maintained while providing good regulation against line, load and temperature changes.

AN-726 Bussing with MECL 10,000 Integrated Circuits

High speed data bus lines are an important part of modern computer systems. Features of the MECL 10,000 family allow construction of data busses in a transmission line environment. This application note describes some of the guidelines to consider when designing high speed bus lines and shows how the MC10123 can be used for maximum bus performance.

AN-727 Television Horizontal APC/AFC Loops: The Last 10 Percent

A discussion of some common problems that may be encountered with the design of Horizontal APC/AFC loops and methods to avoid or overcome them.

AN-728 13-Watt Microstrip Amplifier for 220-225 MHz Operation

Design, performance and construction information are provided for a 12.5 volt, FM Transmitter power amplifier and low pass filter. MRF225 and MRF226 RF power transistors are utilized in the two-stage amplifier to achieve 13 watts of power output to the filter from approximately 125 mW of drive at 225 MHz. Economical dipped-mica capacitors, microstrip lines and eyelet construction have been employed.

AN-729 A Medium Cost PLL Varactor Tuning System Utilizing Off-the-Shelf Logic

A unique frequency domain tuning scheme for varactor TV tuners. The purpose of a frequency domain tuning system is to control a TV varactor tuner complement so that the proper local oscillator frequency is obtained for the channel number selected.

AN-730 A High Speed FIFO Memory Using the MECL MC10143 Register File

First in/first out memories are commonly used to store information in digital processing systems. However, these memories can also be designed to interface subsystems operating asynchronously or at different data rates. This application note describes a high speed first in/first out memory design based on the MECL MC10143 8 x 2 Multiport Register File.

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EB-1	Sensitive Gate Triacs Form IC Alliance – Operate Loads to 4A – 600 V
EB-2	Solid-State Relays State-of-the-Art Signal to Alert Industrials
EB-3	Display It Digitally
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AVAILABLE LITERATURE FROM MOTOROLA
Application Note Selection Guide and abstracts, Data Books and Handbooks, Engineering Bulletins and Product Brochures

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